ASSOCIATION OF AMERICAN MEDICAL COLLEGES
2450 N STREET, NW, WASHINGTON, DC 20037-1127
PHONE 202-828-0400 FAX 202-828-1125

February 2, 1996

MEMORANDUM

TO: Council of Deans

FR: Joseph A. Keyes, Jr.

RE: March 4 Deans Roundtable in Chicago

I am pleased to enclose program and registration information on the first rendition of the Deans Roundtables, *Educational Partnernships in a Managed Care Environment.*

Please note that hotel reservations should be made by **Monday, February 19**. To allow us to make appropriate arrangements for the meeting, we are requesting that you register in advance. Please return the registration form by **Friday, February 23**.

I look forward to seeing you at the inauguration of this program for deans!

enclosure

Deans Roundtable

ASSOCIATION OF AMERICAN MEDICAL COLLEGES
2450 N STREET, NW, WASHINGTON, DC 20037
PHONE 202-828-0400 FAX 202-828-1125

March 4, 1996

Educational Partnerships in a Managed Care Environment

AGENDA

10:00	Welcome and Introductory Remarks	Dr. Robert Daugherty
10:20	Presentations	Dr. Michael Whitcomb Moderator
10:30	Dr. Sim Rubenstein Group Health Cooperative of Puget Sound Seattle, WA	
10:50	Dr. Jack Ott GWU Health Plan Washington, D.C.	
11:10	Drs. David Leach and David Stevens Henry Ford Health System/Case Western Reserve Detroit, MI	
11:40	Dr. Jerry Reeves Sierra Health Services, Inc. Las Vegas, NV	
12:00	Dr. James Ehlen Allina Health System Minneapolis/St. Paul, MN	
12:30	Lunch	
1:15	Discussion with Presenters	Dr. John Hutton Moderator
3:00	Adjourn	

Deans Roundtable

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PHONE 202-828-0400 FAX 202-828-1125

DEANS ROUNDTABLE - MARCH 4, 1996

EDUCATIONAL PARTNERSHIPS IN A MANAGED CARE ENVIRONMENT

There are a number of compelling reasons why medical schools need to be more vigorous in their efforts to shift the clinical education experiences provided to medical students and resident physicians from traditional teaching hospital inpatient settings to a variety of community-based patient care settings, primarily ambulatory practice sites. It is generally understood that the impact of changes in the health care delivery system on the number and case-mix intensity of the patient populations hospitilized in major teaching hospitals is paramount in creating this imperative.

There is, perhaps, less appreciation for the fact that forces at play in the market will make it more difficult for medical schools to place students and residents in appropriate community-based, ambulatory sites. The changes evolving in the delivery system will increasingly demand that ambulatory care services be provided more efficiently. This will present challenges to those designing ambulatory-based educational experiences for students and residents. At the same time, the control over management decision-making in practice settings - such as whether or not students or residents will be allowed to spend time at the practice setting, and if so under what circumstances - is shifting from individual practitioners to organizations as more and more practices are incorporated into physician practice management organizations, physician-hospital organizations, etc. Accordingly, medical school deans interested in creating educational parterships that would provide access to ambulatory practice sites for students and residents will face a different set of issues than those faced in the past.

The purpose of this roundtable is to provide an opportunity for medical school deans to gain the perspectives of a group of executives who work in diverse managed care entitites about issues which deans are likely to encounter in their efforts to form educational partnerships in a managed care environment. To be clear, the roundtable will not address as primary topics the kinds of curriculum content changes that schools should make in order to better prepare students for practice in a managed care setting, or efforts to define a role for the medical school faculty practice plan in the delivery of services in an increasingly competitive market. The roundtable will allow deans to gain an better understanding of the dynamics of the current market place and how these dynamics are likely to affect the availability of clinical education experiences for students and residents.

The organizations (cities where they are located) which will be represented at the roundtable are the George Washington University Health Plan (District of Columbia), the Henry Ford Health System (Detroit), Group Health Cooperative of Puget Sound (Seattle), Sierra Health Services (Las Vegas), and Allina Health System (Twin Cities). The organizations are quite diverse in their structure and management, and the cities where they are located are at different stages with regard to the penetration of managed care in the market.

Deans Roundtable

AAMC ASSOCIATION OF AMERICAN MEDICAL COLLEGES
2450 N STREET, NW, WASHINGTON, DC 20037
PHONE 202-828-0400 FAX 202-828-1125

Educational Partnerships in a Managed Care Environment

Monday, March 4, 1996
10:00 a.m.-3:00 p.m.
Sheraton Gateway Suites
6501 North Manheim Road (near O'Hare Airport)
Chicago, Illinois

HOSTS

Robert M. Daugherty, Jr., M.D., Ph.D
Dean
University of Nevada School of Medicine

John J. Hutton, M.D.
Dean
University of Cincinnati College of Medicine

PRESENTERS

David Leach, M.D.
Director of Medical Education
Henry Ford Health System

David Stevens, M.D.
Vice Dean
Case Western Reserve School of Medicine

Jack Ott, M.D.
Chief Executive Officer
GWU Health Plan

Sim Rubenstein, M.D.
Medical Director of Corporate Health
Group Health Cooperative of Puget Sound

Jerry Reaves, M.D., Vice President
Anthony Marlon, M.D., Chairman & CEO
Sierra Health Services, Inc

Robert M. Daugherty, Jr., M.D., Ph.D.
Dean
University of Nevada School of Medicine

James Ehlen, M.D.
Chairman and CEO
Allina Health System

Advance registration is required. Please return the registration form to the AAMC by Friday, February 23. Hotel reservations should be made by Monday, February 19, to insure room availability. See Hotel Site, Travel & Registration Information sheet for details.

DEANS ROUNDTABLE - MARCH 4, 1996

EDUCATIONAL PARTNERSHIPS IN A MANAGED CARE ENVIRONMENT

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HOTEL SITE, TRAVEL & REGISTRATION INFORMATION

AAMC Deans Roundtable:
Educational Partnerships in a Managed Care Environment
March 4, 1996

Sheraton Gateway Suites
6501 North Manheim Road
Chicago, IL 60018
TEL: (708) 699-6300, FAX: (708) 699-0391

Getting to the Hotel

The hotel is approximately one and a half miles from O'Hare International Airport at the corner of Manheim Road and Higgins Road. The Sheraton provides complimentary transportation to and from O'Hare International Airport. Please use the courtesy phones located near the baggage carousel to request transportation from the airport. Downtown Chicago is just 18 miles away.

Airline Discount Information

United is offering special discounted rates for this meeting. Discounts include a 5% savings off any published promotional roundtrip fare and a 10% savings off full coach class fare. To receive this discount, you or **your travel agent** must use the toll free number 1-800-521-4041 (open seven days a week, from 8:00am to 9:00pm EST) and refer to the **AAMC 563WW** when making your reservations. These discounts are valid providing all rules and restrictions are met.

Hotel Reservations and Room Rates

Hotel rooms have been reserved for our group at the rate of **$109.00** per night based on single occupancy. The rate, which is subject to a state and city occupancy tax currently at 12%, is available 2 days before and after the meeting date.

To make your reservations, please call the hotel's reservation desk at 1-800-548-4193. Please be sure to identify yourself with the AAMC Meeting. Reservations must be made PRIOR to February 19th. Rooms held for our group will be released on this date . Any reservation request received after February 19th will be confirmed on a space available basis only at the group rate. To guarantee your room, the hotel requires a deposit in the amount of one night's room and tax. Otherwise, reservations will not be held after 4:00pm. The deposit will be applied to any guaranteed no-shows. Check-in time at the Sheraton is 3:00pm. The hotel will make every effort to accommodate early arrivals. Check-out time is 12:00 noon. You may arrange for the Bell Captain to store your luggage if you have an early arrival or a late departure.

Registration Procedures **Registration Fee: $60.00**

Advance registration is required. Please return the registration form to AAMC by Friday, February 23. The registration fee covers all meeting materials, coffee breaks and lunch. A check, institutional purchase order, or credit card information should accompany your registration form. Credit card transactions (Mastercard & Visa only) are subject to approval. **Checks should be made payable to the AAMC.**

Cancellation Policy

In order to receive a full refund, notice of cancellation must be received by our offices **in writing** (FAX# 202-828-1125) at least seven working days in advance of the meeting. Withdrawals after that time will result in the forfeiture of the entire fee. Please be aware that the cancellation of any hotel room reservation is your responsibility. If you have any questions, please contact Irene Nicolaidis at (202) 828-0479.

PAYMENT MUST ACCOMPANY THIS REGISTRATION FORM

AAMC DEANS Roundtable: ***Educational Partnerships in a Managed Care Environment***
March 4, 1996, Sheraton Gateway Suites, Chicago, IL

Name: Dr() Mr() Mrs() Ms()_____ Degree: _____

Name As You Wish It to Appear on Badge: _____

Title: _____

Institution: _____

Address: _____

City, State, Zip: _____

Telephone #: _____ Fax #: _____

Do you or anyone attending with you require any special accommodations or services as mandated by the Americans with Disabilities Act? If yes, please describe: _____

REGISTRATION FEE: $60.00

Please see attached meeting facts sheet for details about the registration fee and cancellation policy. Please include a check, purchase order or credit card information with this form. Credit card transactions are subject to approval. Checks should be made payable to **AAMC**.

CREDIT CARD INFORMATION (MasterCard & VISA Only)

Check One: ☐ MasterCard ☐ VISA Amount $ _____

Card Number: _____ Exp. Date: _____

Name as it appears on card: _____

Signature: _____

PLEASE COMPLETE AND RETURN TO:
Meetings Registrar
Association of American Medical Colleges
2450 N Street, N.W.
Washington, DC 20037-1126
Phone: (202) 828-0952 or 0417
Fax: (202) 828-1125

For AAMC Office Use Only:

Ck1#	Ck1 Amt:	I/P	P.O.#
Ck2#	Ck2 Amt:	I/P	AMT/RFND/DTE ISS

Deans Roundtable

ASSOCIATION OF AMERICAN MEDICAL COLLEGES
2450 N STREET, NW, WASHINGTON, DC 20037
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March 4, 1996

Educational Partnerships in a Managed Care Environment

EVALUATION QUESTIONNAIRE

This program evaluation has two goals: (1) to determine whether we met your objectives for the meeting; and (2) to elicit suggestions on how to improve future meetings.

If you do not turn this in by the end of the meeting, please fax it to Lynn Milas at (202) 828-1125.

1. What were the greatest strengths of the meeting?

2. What were the greatest weaknesses?

3. Please suggest improvements for meeting format, scheduling, audience mix and size, or handouts.

4. Please comment on the meeting arrangements, including facilities, location, registration, and advance materials.

5. Please suggest topics and speakers for future Deans Roundtable programs.

6. Would you like to participate in the planning or presenting at a Roundtable meeting?

_____ Yes _____ No

6b If yes, please indicate the topics of greatest interest to you.

Name_____

THANK YOU!

Please use reverse side of this sheet for additional comments.

MONDAY, APRIL 11 (cont'd)

3:00 - 3:15 pm **Coffee Break**

3:15 - 4:15 pm **BREAKOUTS: Small Group Discussions (continued)**

4:15 - 5:00 pm **PLENARY: Barriers and Opportunities Revisited**

Moderator: *Gordon Moore, M.D.*

The discussion will include a summary of the general principles learned from the day's presenters.

5:00 - 6:00 pm **Afternoon Break**

6:00 - 7:00 pm **Reception**

7:00 pm **Dinner**

TUESDAY, APRIL 12

7:30 - 8:30 am **Breakfast**

8:30 - 10:00 am **BREAKOUTS: Exercise: Plan Development**

Participants will return to their small group assignments from Sunday afternoon. During this session, attendees will marshall the insights they gathered from Monday's sessions to further refine their own initiatives that they began to develop on Sunday. Attendees will be asked to present their refined plans to one another for feedback and reaction. Each group will select one case to be presented at the Reports Session.

10:00 - 10:30 am **Coffee Break**

10:30 - 11:30 am **REPORTS**

Moderator: *Gordon Moore, M.D.*

Selected participants will present their plans to the group for critique and encouragement.

11:30 - Noon **PLENARY: Where Do We Go From Here?**
Bernard Mansheim, M.D. and Hamilton Moses, M.D.

12:00 Noon **Adjourn**

MONDAY, APRIL 11

7:30 - 8:30 am **Breakfast**

8:30 - 9:30 am **PLENARY: Barriers and Opportunities**
Thomas Inui, M.D. and David F. Altman, M.D.

This session explores the principles for overcoming barriers that have discouraged mutual collaboration between HMOs and academic medicine. Faculty will also discuss ways of identifying and fostering new opportunities for academic medical centers and HMOs to develop training programs for primary care and generalist physicians.

9:30 - 10:00 am **Coffee Break**

10:00 - 11:30 am **PLENARY: Model Arrangements Between Academic Medical Centers and Managed Care Systems**

These sessions will explore unique arrangements between managed care organizations and academic medical centers.

Moderator: *John Ott, M.D.*

Group Health Cooperative of Puget Sound and University of Washington
Michael J. Wanderer, M.D.

Tufts Associated Health Plan, Inc. and Tufts University
Harris Berman, M.D. and Morton Madoff, M.D.

11:30 - 12:30 pm **BREAKOUTS: Small Group Discussions**

Participants will analyze the model arrangements to further explore the barriers and opportunities presented in the previous session.

12:30 - 1:30 pm **Lunch Break**

1:30 - 3:00 pm **PLENARY: (continued)**

Moderator: *Edward Marine, M.D.*

Henry Ford Health System and Case Western Reserve University
Peter Butler and David Stevens, M.D.

Kaiser Foundation Health Plans, Northern California and The University of California at Davis
Helen Hammer, M.D. and Faith Fitzgerald, M.D.

AAMC / GHAA Symposium

"Training the Generalist: Developing Partnerships Between Academic Medicine and HMOs

April 10 - 12, 1994
Lansdowne Conference Center
Leesburg, Virginia

SUNDAY, APRIL 10

2:30 - 6:00 pm **Registration**

3:30 - 5:00 pm **PLENARY:**

I: Opening Remarks and Introduction
Purpose and Objectives
Hamilton Moses, M.D. and Bernard Mansheim, M.D.

II: Keynote Address: Health Care Reform and Its Impact on the Demand for Generalists
Paul Ginsberg, Ph.D.

III: Introduction to Exercise
Gordon Moore, M.D.

5:00 - 6:30 pm **BREAKOUTS: Exercise: Problem Identification**

Participants will meet in groups of 8-10 to describe to one another an initiative that they would like to undertake in their own organization or institution that would facilitate the development of an HMO/AMC partnership. Participants will be encouraged to include in their descriptions barriers/obstacles that have prevented a partnership and special circumstances/ opportunities that will foster a better relationship. Faculty will distribute a set of criteria to participants prior to the conference in order for participants to better prepare their descriptions.

6:30 - 7:00 pm **Reception**

7:00 - 8:30 pm **Dinner**

TEACHING IN AND FOR A MANAGED CARE SETTING

At the April 10, 1995 meeting of the Administrative Board in Tucson, there was consideration of the need for a conference on teaching in and for a managed care setting.

Reference was made to the April 1994 symposium sponsored by the Group Health Association of America (GHAA) and the AAMC. The program for this conference appears on the next pages, followed by a copy of the published proceedings.

A Focus Session at the 1995 AAMC Annual Meeting will address this topic.

ACKNOWLEDGEMENTS

The development of *TRAINING THE GENERALIST: Developing Partnerships between Academic Medicine and HMOs* was a collaborative effort among many individuals whose expertise and hard work produced this report.

The following experts brought a wealth of experience by reviewing the draft report: Paul Ginsburg, Ph.D., Physician Payment Review Commission; Thomas Inui, M.D., Harvard Community Health Plan and Harvard Medical School; Edward Marine, M.D., Health Care Plan of Buffalo; Gordon Moore, M.D., Harvard Community Health Plan; Hamilton Moses III, M.D., University of Virginia School of Medicine; John Ott, M.D., George Washington University Health Plan; and Michael Wanderer, M.D., Group Health Cooperative of Puget Sound.

We would like to acknowledge the contributions of GHAA staff, Dhulsini de Zoysa, Medical Affairs Department, and Susan Pisano, Communications Department; and of AAMC staff, Robert Dickler. Thanks also to Elaine Zablocki for her contribution.

The growth of organized delivery systems requires that academic medical centers (AMCs) rethink their approach to clinical education. With shortened hospital stays and more ambulatory care, the inpatient hospital setting is no longer the most appropriate setting for clinical education. In addition, HMOs and other organized delivery systems are using teaching hospitals less for routine care. AMCs are under pressure to increase ambulatory medical education, but their capacity for such teaching is limited.

HMOs represent a large and growing patient care setting that can accommodate clinical education. HMOs, in turn, need physicians who exhibit the skills, knowledge, and attitudes needed to practice primary care in HMOs.

Recently the issue has taken on added importance. Pressures from the federal government, several state governments, and employers point to a greater emphasis on primary care and an expanded role for organized delivery systems in the future.

TRAINING THE GENERALIST

Developing Partnerships Between Academic Medicine and HMOs

April 10 – 12, 1994
Leesburg, Virginia

Report on Association of American Medical Colleges and Group Health Association of America Symposium

BACKGROUND: DIFFERING MISSIONS AND CULTURES

Until now, few HMOs and AMCs have reached agreements about teaching. Differences in mission and culture have blocked collaboration. The AMC's missions are to provide high-quality education, research and service; the HMO, on the other hand, has a primary commitment to the efficient delivery of high-quality care to its members. Hoft and Glaser, writing of the HMO- AMC relationship, conclude that "problems may arise between HMOs and medical centers as a result of the disparate styles of practice, the high cost of clinical services at the medical center, and the differing perspectives of HMO and medical center policymakers."[1]

Significant potential conflicts and longstanding biases underlie this desultory pace of collaboration in teaching. The high cost of AMCs reflects their mission and culture. Because of their research and teaching functions, AMCs often epitomize the technological imperative, the desire to use all available technology. In contrast, the role of primary care physicians, in number and function, is different in HMOs than in most AMCs. Primary care physicians in HMOs manage the medical care process. In addition, in most HMOs, enrollees select a primary care physician who coordinates all services and authorizes all referrals.

Despite their divergent missions, today academic medical centers and HMOs share a strong common interest in training generalist physicians in HMOs and other organized delivery systems.

OBJECTIVES: TRAINING THE GENERALIST

To promote medical student and resident training in HMO settings, the Association of American Medical Colleges (AAMC) and the Group Health Association of America (GHAA) co-sponsored the symposium, "Training the Generalist: Developing Partnerships Between Academic Medicine and HMOs". The objectives of the Symposium were:

- ▲ To develop strategies to increase collaboration between HMOs and AMCs;
- ▲ To explore mechanisms that would remove existing barriers to cooperative efforts between HMOs and medical schools;
- ▲ To analyze incentives for establishing HMO-based programs and clinical training experiences for residents and medical students;
- ▲ To identify resources within HMOs, medical schools, and teaching hospitals that can support the preparation of generalist physicians;
- ▲ To analyze the influence of health care reform on primary care physician work-force needs; and
- ▲ To identify models of cooperation between HMOs and academic medical centers that have addressed successfully the issues of control, efficient service delivery, and costs of training physicians in the ambulatory setting.

OPENING REMARKS: RETHINKING MEDICAL EDUCATION

As the Symposium began, Bernard Mansheim, MD, medical director of Gainesville, Fl.-based AV-MED, welcomed participants, saying, "like our health care system in general, the education of health care professionals today is a patchwork quilt". As we move into a new system of health care, Mansheim cautioned that , "we must now determine how to reconfigure medical education to prepare students to practice in an HMO environment."

AAMC president Jordan J. Cohen, MD, added, "I hope this will be the first of a series of discussions ... to accomplish our common goal — the preparation of the world's best physicians and other health care professionals." He pointed out that traditionally, practicing physicians in the U. S. have played a major role in educating young doctors. "I would like to view what we are discussing now as a continuation of that tradition. As HMOs become the usual mode of health care delivery, we have to find ways to involve them intimately in the educational process. Both sides of this relationship have a great deal to gain from continued discussion."

"Both sides of this relationship have a great deal to gain from continued discussion."

KEYNOTE ADDRESS: DEVELOPING PARTNERSHIPS IN THE CONTEXT OF REFORM

Paul Ginsburg, Ph.D., executive director of the Physician Payment Review Commission, set the policy context for discussions about health care reform and its implications for HMOs and AMCs. Ginsburg commented that many reform proposals under consideration envision a restructuring of health insurance markets and a more important role for HMOs. Proposals would establish a more competitive playing field among health plans through community rating, risk adjustment, and other market rules.

Ginsburg pointed to the clear impact that health care reform will have on the relationship between HMOs and AMCs, accelerating many changes that have already begun. These changes include a greater demand for organized systems of health care delivery, increased price competition among service providers, new mechanisms for financing graduate medical education, and expanded health insurance coverage. "Many aspects of reform will increase the demand for generalists and increase the role of HMOs in the health care system," Ginsburg predicted.

"Many aspects of reform will increase the demand for generalists and increase the role of HMOs in the health care system,"

As providers of health care, AMCs will find their positions increasingly challenged. AMCs are already facing opposition to the premium prices they are accustomed to charging for their services. Reform will strengthen this trend with the spread of networks and discounting practices. Another significant financial pressure on AMCs is the Medicare Relative Value Scale (RVS). Medicare RVS limits payment on the procedural services that AMCs emphasize. Medicare RVS is also guiding payment scales among private insurers, further limiting AMCs' ability to shift costs to private payers.

Ginsburg characterized likely changes in Medicare payments for graduate medical education as the final abandonment of the cost-based reimbursement system. This system has been the basis of federal medical education policy. Policy makers are particularly concerned about excess supply of physicians, specialty mix, and training sites, because these issues bear on access and cost.

Policy is evolving toward an all-payer model for financing graduate medical education, based on public contributions to a common pool via a tax-like vehicle. Ginsburg called the all-payer pool a laudable objective that will ease the financial pressure many AMCs are facing in the competitive marketplace.

Ginsburg then made specific remarks on developing partnerships between HMOs and AMCs. "This is of interest to both groups...their objectives really are quite consistent," said Ginsburg. Where the difficulty lies is in overcoming the sometimes antagonistic relationship between the two potential partners. The HMO may wish to maintain control over delivery of care and productivity issues, whereas the AMC may wish to retain control of educational activities. Additionally, potential partners must reconcile many financial issues. For example, when residency training causes the HMO a loss of medical or non-medical staff productivity, Ginsburg noted that it would be appropriate for the AMC to share this cost. The relationship between HMOs and AMCs is purchaser and seller of tertiary care services. The two may also compete for patients.

COLLABORATION: RECOGNIZING OPPORTUNITIES AND BARRIERS

David Altman, MD, director of the AAMC Office of Generalist Physician Programs, and Thomas Inui, MD, chairman of the Department of Ambulatory Care and Prevention at Harvard Medical School and Harvard Community Health Plan, presented together. They discussed barriers and opportunities that HMOs and academic medical centers face in forming partnerships for training primary care physicians.

Altman put the issue into context by analyzing some current changes in health care delivery. "We are moving from a highly specialized system to one that sees primary care as the base of the entire system," he said.

> *"We are moving from an almost studiously cost-unaware system to one that is cost-accountable. We are moving from technology-driven health care to more humanely balanced care. In the past, the profession has largely controlled health care, while now we see a shift to a professional/managerial partnership. We are moving from a focus on the individual as the sole recipient of health care, to a concern with populations as well as individuals, from a focus on acute care to a more balanced view that includes chronic and preventive care. Finally, we are moving from a spotlight on the individual provider, to a focus on teamwork among a whole array of providers, as we develop a more integrated approach to health care systems."*

Two years ago, Altman noted, medical school deans formally committed themselves to the goal of training more generalist physicians, and to the principle that at some future time half of incoming physicians will opt for some form of primary care training. "Appropriate efforts need to be made by all medical schools so this goal can be reached in the shortest time," Altman said.

Inui presented a matrix of possible organizational interactions between academic medical centers and HMOs, including the following activities: education, research, patient care, and community action. Within these domains of interaction, cooperation may range from minor collaboration to full scale integration. There are risks and opportunities for both partners in any of these interactions; these differ from category to category. Systemic review of these risks and opportunities by the organizational parties is an important prelude to expanding the scope or the degree of HMO and AMC interaction.

COLLABORATION: RECOGNIZING OPPORTUNITIES AND BARRIERS

During small group breakout sessions, conference participants analyzed factors that will facilitate partnerships between academic medical centers and HMOs. Not surprisingly, the goals of HMO medical leaders were closely tied to HMOs' most important functions and responsibilities. These are organizing, managing, and delivering high-quality, economical, and satisfying health care to a defined population. HMOs see teaching as an aid to recruiting and retaining staff. Teaching also allows HMOs to directly influence the skills, knowledge, and attitudes of their potential future staff. Teaching may also contribute to a reputation of high-quality and garner desirable academic appointments. HMOs would also hope that shared teaching responsibilities might lead to reduced prices for the tertiary referral services they need. HMOs also cited social responsibility as an important motivation.

AMCs are primarily concerned with teaching students and residents, and are secondarily committed to the welfare of their institutions. By collaborating with HMOs, AMCs hope to expose students to patients and clinical settings that resemble those they will encounter in practice. Ambulatory training will convey principles of preventive and social medicine to students while exposing them to generalist clinical role models. AMCs also hope to enhance available manpower and resources to support their teaching function. Referrals for specialty care, hospital use, and purchased services, such as laboratory and x-ray, are other desirable outcomes of affiliation with HMOs.

PREREQUISITES FOR COLLABORATION

- **Clearly articulated needs, strengths, and weaknesses of both parties.** Participants must clearly understand their own interests and those of the other parties as a first step in the negotiating process.
- **Two strong, integrated partners.** To participate equally both partners must be in a secure position.
- **Identification of mutually compatible leaders.** To form partnerships, someone on each side must take the lead.
- **Knowledgeable faculty.** Faculty knowledgeable in both HMO and academic principles can simplify communication by bridging the two cultures.

There are also significant barriers to academic medical center/HMO partnerships. Small group discussions analyzed these restricting factors. HMO representatives identified two major barriers to collaboration. These are a potential loss of managerial control and the threat to productivity. HMOs feel they must be free to manage elements that are critical to their successful operation, such as the number and composition of physician staff. Adding a second party negotiating about medical education is a potential diversion of leadership from other important activities. Gordon T. Moore, M.D., director of Training Programs at Harvard Community Health Plan, described this as a fear that "academic obligations might whipsaw priorities."[2]

COLLABORATION: RECOGNIZING OPPORTUNITIES AND BARRIERS

HMOs perceive that teaching may cost them more than they receive in services from students and residents. For an HMO to be efficient, it must maximally use its space and work force; HMO managers view students and residents as less efficient than regular staff. In addition, they may view their teaching faculty's lost productivity as a serious financial liability.

OPPORTUNITIES FOR COLLABORATION

- ▲ **More sites for teaching.** To train more medical students and residents in primary care, academic medical centers should move more training to ambulatory sites. There students will encounter several forms of primary care, including family practice, internal medicine, and pediatrics.
- ▲ **More primary care physicians.** HMOs can communicate the advantages of their settings to medical students early in their careers. This will enhance HMOs' ability to recruit and retain young physicians.
- ▲ **Opportunity to develop innovative programs.** For both academic medical centers and HMOs, there is a chance to look afresh at medical education, to experiment, and to enjoy the stimulation of creating new programs.
- ▲ **Prestige and intellectual challenge of teaching.** For HMOs, the opportunity to train young physicians is attractive because it helps retain current staff and attract new physicians and patients.

Major barriers to collaboration from the AMC perspective are that ambulatory patients generally have minor medical problems, that there may not be sufficient funding to pay for the extra cost of ambulatory teaching, and that including physicians from nonacademic settings might subvert the academic recognition system and the governance of academic institutions.

Ambulatory patients provide few important pathophysiology lessons. Most diseases treated in the ambulatory care setting are too prolonged for students to follow during short rotations in these settings.

Teaching students in any ambulatory setting generates financial losses.[3] Fee-for-service revenues generated by residents in hospital outpatient programs may cover teaching costs, but are not available to cover the costs of teaching in HMOs. AMCs feel that they do not have the financial resources to offset these costs.

AMCs may perceive clinical faculty based outside the hospital as less scholarly than those within. Consequently, AMCs may view involving HMO physicians in AMC governance and offering them academic appointments as diluting the quality of faculty.

BARRIERS TO COLLABORATION

- **Academic medical centers' unfamiliarity with HMO practices.** Academic medical centers fear the training physicians in HMOs may lower the quality of medical education, since HMO physicians often are not trained as teachers.
- **Source of funding for medical education.** Financing medical education in HMOs requires that both parties identify resources.
- **Educational costs associated with medical students and residents.** In an ambulatory care setting, training medical students requires extra space and supervision, which will increase costs and lower physician productivity.
- **Limited experience with training methods that work in an HMO.** Teaching medical students within an ambulatory setting may require new educational methods. In the hospital, patients generally stay for at least a day or two, while in an HMO setting, patients come and go within hours.
- **Issues of control and autonomy.** Conflict and competition between physicians practicing and teaching in academic medical centers and their peers in HMOs may arise over teaching priorities and practice habits. Specialists work in an environment where "more is better," ordering more tests and procedures; they focus on the disease, not on the patient in his or her social setting. Primary care physicians generally consider patients' health within a broad social context. Each feels somewhat threatened by the other; they may disagree on when to refer patients to specialists; they may compete for resources such as students' time, attention, and commitment.
- **Current academic reward system.** Academia emphasizes and rewards specialists first — teaching and primary care do not garner equivalent prestige. In the future, as part of efforts to train more generalists, it may be necessary to create new mechanisms to recognize and reward primary care faculty for their contributions.
- **Threat to traditional academic programs.** Moving residents to ambulatory settings limits the service capacity of hospitals.
- **Conflicting demands.** Implementing change of this magnitude requires a substantial time commitment, and may place conflicting demands on those involved in affecting change.

SUCCESSFUL MODELS: LESSONS FROM WORKING PARTNERSHIPS

The Symposium showcased the following model partnerships between academic medical centers and HMOs that are overcoming these barriers and successfully collaborating to train generalist physicians.

MODEL 1:

THE GEORGE WASHINGTON UNIVERSITY HEALTH PLAN AND THE GEORGE WASHINGTON UNIVERSITY

The George Washington University Health Plan (GWUHP), which is wholly owned and operated by George Washington University (GWU) was founded in 1972. It began as an integral part of the department of primary care. John Ott, MD, health plan CEO, estimates that GWU has trained more health professionals in an HMO setting than any other school. Medical students, physician assistants, nurse practitioners, pediatric and primary care residents, clinical psychologists, and health care administrators are among those trained. "We were the first university in the country to require an HMO rotation for all junior medical students," Ott recalled, "and may still be the only one that has all medical students rotating through the HMO."

The health plan has also become an important financial support for the medical center; it accounts for 12 percent of hospital bed days and 31 percent of faculty practice plan volume annually. "Today, it's conceivable that the health plan could survive without the medical center, while it is probably not possible for the medical center to survive without the health plan," Ott said. With 71,000 members currently, the plan is financially successful.

He cautioned participants to avoid some errors GWUHP made. "At first the plan required all faculty to provide care," he said. "That was a serious mistake, but we made that error twenty years ago, and learned from it. Today we encourage faculty to participate, but leave the final decision up to them."

MODEL 2:

GROUP HEALTH COOPERATIVE OF PUGET SOUND AND THE UNIVERSITY OF WASHINGTON

Michael J. Wanderer, MD, director of the Family Practice Residency Program at Group Health Cooperative of Puget Sound, described the HMO's longstanding affiliation with the University of Washington School of Medicine. He cited the HMO's geographical proximity to the medical school as an asset in forming the relationship. "The University of Washington gave the residency academic credibility, and they also gave us hints on how to teach and helped with faculty development," he explained. This arrangement expanded haphazardly during the 1970s. In the mid-1980s the two organizations met to resolve some problems. "Group Health had enough teaching experience to recognize teaching does have a direct impact on clinical availability and productivity of physicians . . . They calculated every direct cost they could think of, and we just agreed to split costs fifty-fifty."

Today about 250 medical students rotate through Group Health each year. Benefits to the University include patient referrals and ambulatory care training sites. From Group Health's point of view, conducting an academic program benefits the plan by enhancing its image. Additionally, teaching physicians receive academic appointments, and must stay abreast of current issues.

These two institutions have developed successful arrangements to share the work and the costs. Group Health is responsible for ensuring staff involvement at all levels in the educational process. The University, in turn, is responsible for selecting medical students for the program and planning their schedules. The University is responsible for the actions of the student, while Group Health is responsible for the actions of the teacher.

MODEL 3:

TUFTS ASSOCIATED HEALTH PLAN, INC. AND TUFTS UNIVERSITY

Morton Madoff, MD, dean of the Tufts University Medical School, and Harris Berman, MD, president and CEO of the Tufts Associated Health Plans, discussed their working relationship.

"The role of the medical school is to educate. The role of the HMO is to provide high quality, cost- efficient health care.

"Many of you who are in academics have encountered the reluctance of administrators and trustees and faculty leadership for undertaking a venture like this," Madoff began. "However, if the Harvard Medical School moves into your town, and forms the Harvard Community Health Plan, and begins to tempt your associated teaching hospitals with invitations, it's quite amazing how quickly attitudes change. That was what happened to us back in 1977."

Tufts formed an IPA model HMO with six associated teaching hospitals, and has grown since then. The university chose not to take ownership of the plan, choosing instead to hold one seat on the governing board. The medical school initially became involved because "we wanted to help fill beds for our teaching hospitals," Madoff said.

> *"We wanted to provide patients for our faculty physicians. We wanted our students to get some real-life experience. And finally, we saw it as a remarkable opportunity to establish a laboratory. In terms of looking at prevention and outcomes and efficient forms of care, our plan has been a fine research tool."*

Berman noted the plan has been helpful in attracting top researchers to the university.

Appropriate roles for the two partners should be well defined, Madoff said.

> *"The role of the medical school is to educate. The role of the HMO is to provide high quality, cost- efficient health care. The HMO has to be run as a business, and at the same time, its leadership must appreciate the value of the academic relationship. The medical school has to have the good sense not to try to manage the health plan, or see it as an extension of the school's educational activities."*

MODEL 4:

HEALTH CARE PLAN AND THE UNIVERSITY OF BUFFALO

Sixteen years ago Health Care Plan began negotiating intermittently with the University of Buffalo for a formal affiliation arrangement. Meanwhile, they have informally developed many cooperative training and research programs. Through affiliation with major teaching hospitals, all staff physicians have faculty appointments. "We have a small primary care internal medicine residency track in partnership with the University Department of Medicine," said Edward J. Marine, MD, medical director of Health Care Plan, an 85,000-member prepaid group practice plan serving Buffalo. "We are the primary clinical training site for pharmacy doctoral students. We've helped train many nurse practitioners and provided preceptorial and other clinical opportunities for medical students and other health professionals."

Although these successes show that an informal arrangement can work, Marine believes a formal affiliation could facilitate expansion and bring many additional benefits. "The informality of the relationship means we lack the ability to coordinate activities," he said. "There is no clear means of accountability. Internally we depend on volunteers, and this can lead to physical plant and support staff issues, since they are shared resources." He noted, "with much clearer recognition of a common focus on the importance of primary care, negotiations are continuing. We now seem to be marching very quickly and steadily toward a formal affiliation agreement."

MODEL 5:

HENRY FORD HEALTH SYSTEM AND CASE WESTERN RESERVE UNIVERSITY

Peter W. Butler, senior vice president for Hospital Affairs at Detroit-based Henry Ford Health System and David Stevens, MD, vice dean of Case Western Reserve School of Medicine, in Cleveland, described the three-year-old affiliation between their institutions, three hours apart by car. "The distance is both a challenge and an advantage," Stevens said. "Distance can lead to communication problems. But distance has also facilitated this affiliation — because we are not business competitors."

Case Western has developed a seven-year generalist track for students and residents, focused on organized systems of health care delivery. "Health care is moving in that direction due to market forces, regardless of what happens on Capitol Hill this year," Stevens said.

"We feel if we trained our students in our own image we would be violating our fiduciary obligation to get them ready for the future. Interestingly enough, it isn't hard to convince our students about that –it's much harder to convince our faculty."

Case Western currently graduates 20 percent of its students into family medicine, general internal medicine, or general pediatrics. "We envision doubling that percentage through this process," Stevens said. Furthermore, to train future physicians, Case Western has revised its curriculum for all students. Students meet once a week in

small groups focused on solving population-based problems. They are encouraged to think through population-based issues as they go through basic and clinical science. In forming their partnership, Henry Ford and Case Western agreed to be "primary, but not exclusive affiliates." Initially, the appointment system allowed a Henry Ford committee to make recommendations to the medical school's promotions and tenure committee, bypassing departmental oversight. "That was a mistake," Stevens said, "but it didn't last long. The whole issue of academic appointments and governance is complex, and departmentally embedded issues like appointments and curriculum need special attention."

To enhance cooperation, the medical school dean joined the Henry Ford board; an associate dean moved to Detroit to oversee academic aspects of the affiliation. Since then the two organizations have written papers and grants together, and regularly exchange teaching faculty. "Faculty development is very important and goes in both directions," Stevens said. "People from Cleveland go to the health plan to talk about approaches to teaching, and people from Detroit teach medical school faculty about practice in HMOs."

MODEL 6:

KAISER FOUNDATION HEALTH PLANS, NORTHERN CALIFORNIA, AND THE UNIVERSITY OF CALIFORNIA AT DAVIS

Helen Hammer, MD, director of the Internal Medicine Residency Program at the Kaiser Permanente Medical Center in Sacramento, and Faith Fitzgerald, MD, vice-chairman of the Department of Medicine, University of California at Davis, discussed the strengths of their integrated program.

The UC-Davis internal medicine program rotates residents through clinics at Kaiser Permanente medical centers, and a Kaiser hospital. The teaching physicians at the medical centers are volunteers, and hold faculty appointments from the University. "From the HMO viewpoint, patient care is our primary goal, and teaching is sometimes seen as an obstacle," Hammer said. "The university has fears about the quality of training away from the mother ship. How do we overcome these barriers? Through a constant effort at communication." The health plan and university have set up joint committees on graduate medical education and clinical competence. While the university retains primary administrative responsibility for the residency program, they jointly select interns. Benefits to the university include student exposure to a large population of patients with common complaints, who can be followed over time. Kaiser cites the challenge of teaching as their primary benefit. Fitzgerald said,

> *"clearly the practitioner of medicine practices medicine better than the academic subspecialist practices medicine. The academic subspecialist does academic subspecialty better. It is not what you do, but how well you do it, that is important. I think one of the saving graces in the relationship between UC-Davis and Kaiser has been that we hold one another in high regard."*

CLOSING REMARKS: FORMING SUCCESSFUL PARTNERSHIPS

During the final plenary session, moderated by Gordon T. Moore, MD, director of Teaching Programs at the Harvard Community Health Plan, participants discussed strategies for successful partnerships. Several basic themes or principles emerged from this discussion.

■ IMPROVED COMMUNICATIONS

A basic theme, cited by many participants, is the gap between the attitudes and missions of academic medicine and HMOs. Exploring those differences openly will be a necessary first step in forming partnerships. Key aspects of this process include:

- ▲ Finding champions with authority and resources within both the academic medical center and HMO environments.
- ▲ Recognizing the strength of cultural values and traditional misinformation within both parties, and developing mutual respect.
- ▲ Generating a shared vision for collaboration.

■ FINANCING

Several participants emphasized the importance of not getting mired down in business issues early in the collaborative process. Instead, they recommended starting with a pilot project that is both manageable and significant.

- ▲ Address financial and productivity issues early.
- ▲ Focus on education, not business.

Moore commented,

> *"these two concepts are not inconsistent. Both ideas suggest that financial questions are in fact important issues, and potential barriers to collaboration. Each organization must take a tactical viewpoint in deciding when business concerns are factors that will promote a relationship, and when they are potential barriers, which could block the relationship. The chosen concept must fit the specific circumstances and the strategic and tactical situation the organization faces."*

■ SENSITIVITY TO COMMUNITY NEEDS

Another set of ideas focused on the role of the broader community:

- ▲ HMO customers are not faculty and medical schools, but communities and their populations.
- ▲ Teaching should respond to community needs.

In many states, pressure from consumers and the state legislature is an active force promoting generalist primary care physician training. In states with substantial rural populations, consumers want young physicians to be trained in community-based clinic settings, where the patients are, and where perceived community needs are. One participant from a rural area said, "a community-based focus makes it easier for people to set aside their fear of change."

CLOSING REMARKS: FORMING SUCCESSFUL PARTNERSHIPS

SHARED VISION

Finally, there was considerable discussion on how to keep new projects moving forward. A popular theme stressed the overwhelming importance of persisting in the face of challenge. In many organizations, institutional power to block new ideas exceeds the power to create. One possible response, noted Moore, is to move away from the formal, decision-making level of the organization. By moving to a more personal level, a few people who are committed to a pilot project can move a project ahead.

Another effective way to bypass restrictive institutional forces, Moore noted, is to focus first on shared vision and goals.

> *"Altruism shows up most easily in abstract discussions. In a general conversation, people tend to think and talk in a public-spirited way. As they start talking about specific plans and methods of implementation, barriers appear; people start to protect their own interests. When you start with a broad vision that has idealism built into it, you can appeal back to that vision if problems arise during the implementation phase."*

The spirit of the conference was marked by cautious optimism — an appreciation of the rare opportunities facing academic medical centers and HMOs, tempered by a recognition of the barriers to change. Perhaps most significant was the inspiration offered by successful academic medical center and HMO partnerships.

The spirit of the conference was marked by cautious optimism – an appreciation of the rare opportunities facing academic medical centers and HMOs, tempered by a recognition of the barriers to change.

During the final session, participants discussed the lessons that had particular applicability to their own local issues. James Brexler, president and CEO of the Baton Rouge General Medical Center, expressed a sentiment shared by many, saying,

> *"The Henry Ford/Case Western example gave us a very useful model to work from. Our situation in Louisiana is very similar to theirs. We now have an affiliation and a good working relationship with the Louisiana State University Medical School, in New Orleans. We hope to build on that to create an expanded center of primary care training, including internal medicine family medicine, pediatrics, and someday obstetrics. We're so close to making something very exciting happen."*

1 Hoft, R.H., and Glaser, R.J. The Problems and Benefits of Associating Academic Medical Centers with Health-Maintenance Organizations. N Engl J Med 307 (1982):147-153.

2 Moore, G.T. Health Maintenance Organizations and Medical Education: Breaking the Barriers. Acad Med 65 (1990):427-432.

3 Kirz, H.L., and Larsen, C. Costs and Benefits of Medical Students Training to a Health Maintenance Organization. JAMA 256 (1986):734-739.

Symposium Speakers

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Judy Cahill
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AAMC ACCESS
SURVEY #6 -
Health Maintenance Organizations Sponsored or Co-Sponsored by or Operated in Partnership with Medical Schools and Academic Medical Center Hospitals and Health Systems

Summary Findings

Twenty-one of the 34 participants in the AAMC ACCESS pilot responded to Question #6. Thirteen institutions sponsor or co-sponsor a Health Maintenance Organization (HMO) or participate in one via a partnership arrangement (Yale-New Haven Hospital; University of Florida Health System; University of Chicago Hospitals; University of Iowa Hospitals and Clinics; University of Kentucky College of Medicine; Johns Hopkins Bayview Medical Center; University of Maryland School of Medicine; University of Michigan Medical Center; University of Missouri/Kansas City School of Medicine/Truman Medical Center; Washington University School of Medicine; Duke University Medical Center; Oregon Health Sciences University Hospital; and University of Texas Medical Branch). Most of these are partnership arrangements

Eight institutions reported that they do not sponsor, co-sponsor or participate as a partner in an HMO (University of California at San Francisco Medical Center; Creighton Medical School/Saint Joseph Hospital; Columbia University College of Physicians and Surgeons; Carolinas Medical Center; East Carolina University School of Medicine; University of Cincinnati College of Medicine; Medical University of South Carolina; and University of Washington School of Medicine). University of Cincinnati Medical Center sponsored an HMO, University Health Plan, from 1986 until 1993, when it was sold to Blue Cross/Blue Shield of Ohio. Carolinas Medical Center reported that its decision may be reevaluated, as a Medicaid HMO will be implemented in the area in 1996. This could have significant financial impact on the Medical Center, especially if the Medicaid HMO's provider network does not actively involve the Medical Center.

Types of Plans, Enrollment and Enrollment Projections

Eight respondents sponsor, co-sponsor or are partners in commercial HMOs or mixed offerings that include commercial plans, plans for faculty and staff and Medicaid beneficiaries (Yale-New Haven Hospital; University of Kentucky College of Medicine; Johns Hopkins Bayview Medical Center; University of Maryland; University of Michigan; Washington University School of Medicine; Duke University Medical Center; and University of Texas Medical Branch). Only one of these, University of Texas Medical Branch, currently sponsors a Medicare HMO; one other respondent, Duke University, has plans to offer a Medicare risk product in late 1996. Yale-New Haven Hospital, in partnership, offers three HMOs; combined enrollment of its two Medicaid HMOs is 11,200; the Hospital is also one of 13 owners of the 200,000-enrollee Aetna Health Plans of Southern New England. University of Kentucky sponsors an HMO for university staff and dependents, which currently has 10,000 enrolled lives. Because current enrollment comprises 85 percent of the university employees and their dependents, growth projections for this HMO are quite limited. University of Kentucky is the majority owner in a privately organized HMO with 8,000 enrollees, which is expected to grow significantly, to between 70,000 and 100,000 enrollees, in the coming five years. Duke University offers a licensed HMO in

partnership with the managed care subsidiary of a major insurance company. After planned addition of Medicare and Medicaid products, projected enrollment in Duke University's HMO will rise to 111,000 by 1998. The University of Texas Medical Branch is a partner in a commercial HMO, which offers a Medicare plan, an employee plan, and a commercial product. The value of these contracts exceeds $260,000,000; they pay outside physicians another $50,000,000. Revenues are expected to grow to $300,000,000 in the next 18 months. The institution is also under consideration for a Medicaid contract, which will add another $100,000,000 in revenues.

The University of Maryland School of Medicine, with 11 partners, co-owns a federally qualified HMO with an enrollment of 47,760, comprising commercial enrollees and staff. The University of Michigan Health System operates HMO, PPO, and POS plans, with a total enrollment of 95,000 (88,000 commercial and 7,000 Medicaid covered lives). Michigan expects enrollment in its HMO to grow 20 percent in each of the next three years. Washington University School of Medicine co-owns a 50,000-member network HMO with it affiliated hospital system. Staff and dependents comprise the largest enrollee group at 60 percent, and enrollment is expected to grow a minimum of 10 percent in each of the next five years. In addition to these, University of Missouri/KC/Truman Medical Center, which currently operates a Medicaid HMO, has plans for a full-service HMO to enable it to bid on contracts for commercial populations.

Two respondents' managed care organizations enroll only faculty and staff of the institution and/or university (University of Chicago Hospitals, with 12,000 enrollees, and University of Iowa Hospitals and Clinics, with 5,200 enrollees). University of Chicago Hospitals reported that its HMO premiums are higher than the market. Enrollment has grown, however, in part due to the hospital and the university subsidizing employee enrollment in the plan. Three respondents have HMOs for their employees in addition to commercial HMOs or include staff in their commercial plans (University of Maryland; University of Michigan; and Washington University School of Medicine). The University of Florida Health System plans to offer an HMO-like product to employees of its hospital, faculty group practice and health system by late 1996. Potential lives to be enrolled total 8,000.

Three respondents currently sponsor or co-sponsor solely managed care plans for Medicaid beneficiaries (University of Florida Health System; University of Missouri/KC/Truman Medical Center; and Oregon Health Sciences University). Oregon's fully capitated plan serves 24,000 enrollees in the state's expanded Medicaid managed care program (20 percent of the Medicaid market in the Portland metro area). Growth projections are flat, in part due to Oregon state budget pressures that limit eligibility and impose premiums on enrollees. Truman Medical Center's Medicaid HMO has a current enrollment of 13,900 covered lives (35 to 40 percent of the eligible population). In 1996, Missouri will expand Medicaid, and in response, University of Missouri/Truman Medical Center is starting a full-service HMO through a wholly-owned subsidiary corporation. Of the 88,000 potential covered lives, the Medical Center expects to attract 20 to 25 percent. In addition, the University of Chicago reported that a prepaid plan (PHP) for Medicaid beneficiaries is in the advanced planning stages.

Physician and Institutional Providers in the Managed Care Plans

At seven institutions faculty and university physicians and facilities are the primary providers in the HMO plans (Yale New Haven Hospital; University of Florida; University of Chicago, University of Iowa; University of Missouri/KC/Truman Medical Center; Washington University; and Duke University). Yale-New Haven Hospital's plan contracts with its Medical Staff IPA through a PHO jointly owned by the IPA, Yale School of Medicine and Yale-New Haven Hospital. At the University of Iowa, the provider panel is composed primarily University Hospitals' physicians and facilities. However, the point-of-service plan includes contracting community physicians and hospitals. Contracting primary care community physicians can obtain clinical privileges at the university hospitals to care for their patients enrolled in the plan.

Four respondents use both their own as well as community providers (University of Kentucky; University of Maryland; University of Michigan; and Oregon Health Sciences University). While faculty physicians comprise the largest provider groups in the University of Michigan's HMO and the University of Kentucky's HMO for staff and dependents, both Kentucky's and Michigan's plans maintain contracts with large numbers of community hospitals and physicians throughout their HMOs' service areas. Similarly, University of Missouri/KC/Truman Medical Center, whose faculty and physicians currently are the sole providers in its Medicaid HMO, will establish a network of hospitals, physicians, and other providers throughout a seven-county area to care for enrollees in its planned full-service HMO. The University of Maryland's managed care delivery network includes practices not owned by or affiliated with the university; all specialty care from these sites is referred to the University's system. In the Oregon Health Sciences University's HMO, major providers in the Portland metro area are staff model clinics and Oregon Health Sciences University faculty; in rural areas, most primary care providers are staff model clinics. Specialists are on individual contracts in both areas.

Meeting Teaching and Research Missions

Four respondents reported that their HMO settings and patients are used for teaching and research activities (Yale-New Haven Hospital; University of Iowa; University of Maryland; and University of Michigan). University of Iowa plan enrollees have the option to receive primary care without medical student or resident involvement; all inpatient care is provided in a teaching setting.

Four respondents reported that to date little or no teaching occurring in their HMO settings (University of Kentucky; University of Missouri/KC/Truman Medical; Washington University; and Duke University). Truman Medical Center reported that the role of the new full-service in the teaching has not yet been defined, but that it will likely be used to help trainees and medical students adapt to the managed care environment. University of Kentucky reported that its two HMOs are just beginning to play a role in the institution's education and research activities. At Duke University, several managed fellowships are offered for faculty.

Institutional Responses

University of California at San Francisco Medical Center, California
UCSF Medical Center does not have an HMO sponsored or co-sponsored by the institution, nor does it operate one in a partnership arrangement.

Yale-New Haven Hospital, Connecticut
Yale-New Haven Health Services Corporation (YNHHSC), the corporate parent of Yale-New Haven Hospital, participates in a joint ownership arrangement with three health maintenance organizations, one Preferred Provider Organizations, an Independent Practice Association (IPA) and a Physician Hospital Organization (PHO). Yale Preferred Health (YPH), an HMO, was formed in 1995 and is owned equally by Yale University and Yale-New Haven Health Services Corporation. This partially capitated plan serves the Medicaid population in New Haven County and the western half of the state and currently serves over 11,000 Medicaid enrollees. YPH is important to Yale-New Haven Hospital's community service and teaching mission, because it meets the health needs of its local community and provides a financing mechanism for patients using the Hospital's Primary Care Center, an outpatient teaching clinic on the Medical Center campus. YPH is expected to grow to 15,000 lives by the end of 1996.

HealthChoice of Connecticut (HCC) is a PPO that was formed in 1991 by Saint Francis Hospital and Medical Center (SFHMC) of Hartford, Connecticut. It currently is equally co-owned by Yale-New Haven Health Services Corporation and SFHMC. HCC serves approximately 155,000 enrollees in the state, and will continue to grow in the coming years. To serve the Medicaid population in the Hartford County area and the eastern portion of the state, in 1995 HCC created the HealthChoice Family Plan, a partially capitated plan. Currently, HealthChoice Family Plan has approximately 200 enrollees and is expected to grow steadily in the next few years. Yale-New Haven Hospital also is one of 13 Hospital owners of Aetna Health Plans/Southern New England (AHP/SNE). This HMO currently enrolls over 200,000 members.

The Yale-New Haven Medical Staff IPA, which includes over 1,000 physicians affiliated with Yale-New Haven Hospital, contracts with the Yale-New Haven Hospital Physicians Corporation. This PHO is jointly owned by the IPA, Yale School of Medicine and Yale-New Haven Hospital. The PHO is the one vehicle for the Medical Center to obtain managed care contracts which support the teaching and research missions of the Yale School of Medicine and Yale-New Haven Hospital. Currently, the PHO has over 50,000 lives in its various contracts with managed care plans and large employers. It is expected to grow tremendously in the coming years.

For additional information contact: Frank Tiedemann, Sr. Vice President, Health System Development, Yale-New Haven Health Services Corporation, Tel. 203/785-2612; FAX 203/785-7108; or Tucker Leary, VP, Managed Care, Yale-New Haven Health Services Corporation, Tel. 203/785-2610; FAX 203/737-2904. No internet addresses are available.

University of Florida Health System

The University of Florida Health System (UFHS) entered a partnership with AvMed Health Plan for a Medicaid HMO in 1994. UF/Shands and AvMed have equal governance and share profits 50/50. UF providers make up the majority of the provider network, with some AvMed primary care physicians also participating. UF appoints the Medical/Resource Directors for each service and they work with AvMed's corporate Medical Director. Present enrollment in the plan is low, at approximately 2,000 members. Several other Medicaid HMOs entered the market shortly after UFHS' partnership with AvMed, and they have gained greater market share. UF physicians and Shands Hospital are also providers in the other Medicaid HMOs.

UFHS is developing a plan to offer an HMO-like product to the employees of Shands Hospital (which is self funded), the Faculty Group Practice (currently commercially insured), and UFHS, Inc. (currently commercially insured). These groups include a total of approximately 8,000 lives, including dependents. The plan will be completed by July 1, 1996 and open enrollment will begin in October/November. To better manage utilization, UFHS will be developing a dedicated "HMO faculty" within the Faculty Group Practice. These faculty members will initially service our AvMed commercial contract. The number of "HMO faculty" will expand as enrollment in at-risk contracts grows and as more faculty members learn how to effectively manage care.

For additional information contact: Susan K. Knowles, Chief of Staff, UF Health System, Tel. 904/846-1807

University of Chicago Hospitals, Illinois

University of Chicago Hospitals has a small (12,000 covered lives) HMO-look-alike HMO that it runs for employees and families of the University and the Hospitals. This University of Chicago Health Plan (UCHP) is governed by a board of directors, mutually selected by the Hospitals and the Medical School. Enrollee premiums are paid by the University and the Hospitals to the Governing Board. The Governing Board then makes primary care capitation payments to subgroups of the faculty in the Departments of Medicine and Pediatrics, who serve as primary care physicians. Adult services for enrollees are provided at the Medical Center's Internal Medicine Clinic, which has expanded into a full-service primary care site that offers student health services, service for UCHP enrollees, and for fee-for-service patients. Pediatric capitation payments are made to the General Pediatrics section, which offers care through a site on campus and several community sites, although the latter are not heavily enrolled.

Payment for specialty and inpatient services are made on a discounted fee-for-service basis. Partially as a result of this mechanism, and partially as a result of general University practice patterns, UCHP has a premium that is noticeably above the market rate. Nevertheless, it has grown in recent years to its current size, at a rate that is believed to roughly approximate its growth potential. The growth is partially because of the Hospitals' willingness to subsidize employees in this plan, and partially because of the quality and convenience of the services. The University also subsidizes its employees, though at a lower rate that the Hospitals'.

The Medical Center is now in the advanced planning stages of providing Medicaid managed care through a Pre-paid Health Plan (PHP), which will have many of the same properties of an HMO. Organizational details are still being worked out. There have also been several discussions with at least one local HMO about how joint venturing with the Medical Center, including the incorporation of UCHP into their local offerings. However, those discussions have not resulted in specific action to date.

For further information contact: Mike Koetting, Vice President, Program Evaluation, Tel. 312/702-3296.

University of Iowa Hospitals and Clinics

Since January 1995, the University of Iowa has offered its own point-of-service and gatekeeper HMO options to its faculty and professional and scientific staff. These offerings were developed and are administered with the help of Blue Cross/Blue Shield of Iowa and McNerney Heintz, its managed care subsidiary. Because the products are available only to University employees and the University is a self-insured employer, it has not been necessary to obtain formal HMO licensure. Formal licensure will become necessary if the products are marketed more broadly, and the products, rather than the self-insured employers, will bear the insurance risk. Under the current arrangement, the University Hospitals and faculty physicians provide the clinical services and manage the care of enrollees. Blue Cross/Blue Shield provides claims processing; and McNerney Heintz provides consultation on various aspects of the plans.

1996 enrollment in UI Care (the gatekeeper option) totals 2,654 covered lives - up from 2,327 covered lives in 1995. 1996 enrollment in Unity Choice/UI Select (the point-of-service option) is 2,495 covered lives - up from 1,646 covered lives in 1995. The UI Care provider panel is comprised exclusively of University of Iowa physicians and facilities. UI Care physicians are either tenure track or clinical track faculty. Because the clinical track is a relatively new endeavor at the University of Iowa, most care of HMO patients is currently provided by tenure track faculty. Unity Choice/UI Select includes both the University physicians and facilities and contracting community physicians and hospitals. Community physicians in the plan are eligible for clinical track appointments and, if they are primary care physicians, have the option of obtaining clinical privileges at the University Hospitals to care for patients in the two University health plans. Although enrollees can opt to receive their primary care from a faculty physician without involvement in teaching programs, all care to HMO enrollees is provided in the same teaching settings as other care. All inpatient or procedural care is provided in teaching settings, with full involvement of medical students and residents.

For further information contact: Kent Bottles, M.D., Medical Director of Managed Care, Tel. 319/335-8232, FAX 319/335-8348; Internet: kent-bottles@uiowa.edu

University of Kentucky College of Medicine, Kentucky

The University of Kentucky Medical Center is involved with the sponsorship of two health

maintenance organizations: UKHMO and Commonwealth Healthcare Alliance HMO. UKHMO is a captive HMO which was established for the principal purpose of providing healthcare through an HMO type program to the employees and dependents of the University of Kentucky. UKHMO has been in operation for approximately eight years and is administered through a contract with Blue Cross of Kentucky. It has approximately 10,000 enrolled lives, and is organized as a group model, in which the University of Kentucky Medical School faculty group practice is the only physician provider group and the University of Kentucky Hospital is the designated hospital. The HMO is not federally qualified.

The second HMO in which the University of Kentucky is a sponsor is the Commonwealth Healthcare Alliance HMO. This is a privately organized HMO in which the University of Kentucky Hospital is the majority owner. The Commonwealth Health Alliance is owned in a cooperative arrangement with six other sponsoring hospitals. It is the captive HMO of the Commonwealth Healthcare Alliance provider network company. The Commonwealth Healthcare Alliance provider network company consists of 44 hospitals and approximately 1,700 physicians located throughout 80 counties in eastern Kentucky. The Commonwealth Healthcare Alliance HMO enrolled its first members in the Spring of 1996. At the current time, it has approximately 8,000 enrollees. It is a mixed model HMO and it is currently not federally qualified.

The UKHMO and Commonwealth Healthcare Alliance HMO are just beginning to have an impact on the institution's education and research activities. Up until the current time, most of the impact has been on direct patient care and on quality management activities. During the past year, a utilization review group has monitored the patient care activities of the UKHMO enrolled population. A major outgrowth of that effort is the establishment of a committee to develop a formulary and to monitor pharmacy costs which have turned out to be much higher than anticipated. A number of other utilization issues are being defined at the current time.

The projections for growth of the university sponsored HMO's are as follows: relatively limited growth is projected for the UKHMO which is largely directed toward employees at the university. At the current time, approximately 85 percent of the university employees are enrolled in the UKHMO, thus, there is not much opportunity for growth of this program. CHA Health HMO, on the other hand, is a new HMO and is expected to grow significantly in the coming five years. It is anticipated that within five years there will be between 70,000 and 100,000 enrollees in CHA Health.

For additional information contact: Bobby Rogers, Tel. 606/257-7950; FAX 606/257-7960 for UKHMO; or Jim Baumgarten, Tel. 606/271-7160; FAX 606/272-6705 for CHA HMO. No internet addresses are available.

Johns Hopkins Bayview Medical Center, Maryland

Johns Hopkins Bayview Medical Center does not directly sponsor, co-sponsor or participate in via a partnership arrangement with an HMO. However, it has relationships through Johns Hopkins Medicine that go beyond the typical third-party participation agreements with HMOs.

As a member of Johns Hopkins Medicine, the Medical Center shares a common interest in providing high quality and cost-effective care via an integrated delivery system. Within Johns Hopkins Medicine, there are two organizational entities that provide direct HMO or HMO-like services: Johns Hopkins Medical Services Corporation and Johns Hopkins Health Care. The Johns Hopkins Medical Services Corporation, with nineteen sites throughout the state of Maryland, manages capitated arrangements with Prudential and the Uniformed Services Family Health Plan. These plans in turn have arrangements with the other entities within Johns Hopkins Medicine and with network providers, where these are needed to fill coverage gaps.

In addition to providing a streamlined single entity to contract with HMOs, Johns Hopkins Health Care, LLC, offers HMOs fully capitated, carve-out and packaged price "at risk" products. Along with area employers, Johns Hopkins Health Care also co-sponsors the Employee Health Plans, a non-profit PPO type model that replaces traditional employer self-insured plans. The Employee Health Plan is beneficial to employers, since it allows them to control or reduce their health care costs, while offering a plan to employees that, despite its lower cost, allows greater freedom of choice than traditional, for-profit HMO plans.

For further information, contact: Mark Hopkins, Director of Payor Relations Johns Hopkins Bayview Medical Center, Tel. 410/550-3011; FAX 410/550-7996; Internet: mhopkins@welchlink.welch.jhu.edu.

University of Maryland School of Medicine, Maryland

Preferred Health Network (PHN) is a federally qualified IPA model HMO based in Baltimore, MD. The University of Maryland Medical System (UMMS) is one of 12 partners, 11 being hospitals in the greater Maryland/Washington, DC area. PHN's primary market is in the Maryland/Washington, DC area, with the majority of enrollment from Maryland. Current enrollment is 47,760 enrollees in commercial and hospital-based accounts; no Medicare or Medicaid products are offered at this time. UMMS's role in provision of medical care is as one of the several specialty referral sites. The University Network (Unet), is an ERISA plan, offered to hospital employees of the University of Maryland Medical System (UMMS). The plan was originally offered in 1994 and currently covers 7,800 lives, or approximately 87 percent of all employees. As noted, at this time only the hospital staff and administration and their eligible dependents are eligible to join Unet.

Although growth projections are not generally released, the institution's leadership anticipates a steady increase over the next five years, as the product is offered to other UMMS entities such as the academic schools and provider associations (P.A.'s) affiliated with the system. The Unet panel of providers primarily comprises the PA's of the medical and academic staff of UMMS, University Physicians, Inc. Resident training is active within these practices as well as, obviously, within the hospital. The network also includes several practices not owned or officially affiliated with UMMS, which were included to offer geographically dispersed access to primary care. All specialty care is referred back to the UMMS system.

For more information contact: Priscilla Adams Goode, Plan Administrator, 419 S. Redwood Street, Suite 200, Baltimore, MD 21201; Tel.: 410/328-6304; FAX 410/328-0003; Internet: pgoode@upi.ab.umd.edu

University of Michigan Medical Center, Michigan

MCARE, a Michigan licensed managed care plan, offers HMO, PPO, and POS plans. It is a not-for-profit membership corporation, with the Regents of The University of Michigan serving as the sole corporate member. It is a network model plan and is not federally qualified. Currently MCARE has 95,000 total covered lives of which 88,000 are commercial and 7,000 are Medicaid. Principal enrollee groups comprise University of Michigan employees and dependents, and over 70 other employers with employees and dependents in MCARE's service area (Ford Motor Company, Michigan Consolidated Gas, Stroh Brewery, IBM, Eastern Michigan University, and others). In addition, MCARE offers a Medicaid managed care product in parts of its service area.

Within the University of Michigan Health System, the delivery network is owned by the Health System. Faculty from the Health System interact with MCARE staff on a variety of health services research activities, such as development of clinical pathways). Undergraduate and graduate medical students interact with MCARE patients on a daily basis throughout the delivery network. The University of Michigan Health System is MCARE's largest provider group. However MCARE maintains contracts with over 35 community hospitals, and hundreds of private practice physicians and groups throughout southeast Michigan. MCARE has grown significantly during the past few years and currently projects its growth rate to be approximately 20 percent for each of the next three years.

For additional information contact: Peter W. Robert, President, MCARE, Tel. 313/747-8700. No internet address is available.

University of Missouri/Kansas City School of Medicine/Truman Medical Center, Missouri

In response to the State of Missouri's shift to Medicaid managed care for AFDC recipients in 1984 (for Jackson County beneficiaries only as of 1915(b) demonstration project), Truman Medical Center became licensed as an HMO for the purposes of serving this population. For the past 12 years the institution has managed the for an enrolled Medicaid population in cooperation with Hospital Hill Health Services Corporation (the physicians group), Truman Medical Center-East; Truman Medical Center-West; and Children's Mercy Hospital of Kansas City and its physicians. In 1996, the State of Missouri will expand its managed care initiative to include most eligibility categories under Medicaid. To participate in this new program, Truman Medical Center has started a wholly-owned subsidiary corporation called TrumanCare™. TrumanCare™ is being licensed as a full-service HMO not only to contract under the State's Medicaid program, but also to position the institution to bid on other enrollee populations. Not only will this HMO compete for enrolled populations directly, it will also be used as a single contracting source for the medical center and its physicians to subcontract with other HMOs so

their enrolled populations can utilize Truman Medical Center.

Between its formation in 1984 and 1996, Truman Medical Center's HMO has had a market share of 35 to 40 percent among the AFDC Medicaid population. At present, total enrollment encompasses 13,900 Medicaid covered lives. Truman Medical Center has no other enrolled population until the institution completes the implementation of TrumanCare™, scheduled for later this year. Potential covered lives in a seven-county area for Missouri Medicaid total approximately 88,000. Truman Medical Center has estimated that it will attract 20 to 25 percent of this market (17,600 to 22,000 lives) in the initial stages. The institution is currently trying to incorporate numerous cultural changes, which are believed necessary to remain competitive as private HMOs move into the market that the Medical Center has traditionally served. The institution is optimistic about the future, but knows that is has an uphill struggle.

The HMO's role in education and research has been tangential over the last 12 years. The new TrumanCare™ entity's role in these activities has not yet been defined, but Truman Medical Center sees the HMO as having a role in helping new physicians and medical students adapt to the managed care environment.

Under the current Medicaid-only HMO, the hospital's facilities, its medical staff, and the local children's hospital and its medical staff are the sole providers in the HMO. As implied above, the current HMO will cease to exist once the new TrumanCare™ becomes fully functioning. In the new HMO, the institution will offer its managed care product to an expanded group of patients. Under the new HMO, Truman Medical Center is establishing a network of hospitals; primary care physicians; specialists; and other ancillary providers (e.g. mental health, pharmacy, dental, transportation, and others) throughout the planned seven-county service area to care for this enrolled population.

For additional information contact: Joe Cecil, Chief Operating Officer, TrumanCare™, Tel. 816/855-4804; FAX 816/855-4803. No internet address is available.

Washington University School of Medicine, Missouri

Washington University School of Medicine (WUSM) is co-owner of Partners HMO with its affiliated hospital system, the BJC Health System. Partners is a 50,000-member network HMO, with employees of owners comprising the largest enrolled group (60 percent). The next single largest enrollee group is the Missouri state government (7 percent). The remaining 33 percent is comprised of mostly commercial groups, none of which exceeds 3 percent of the total.

WUSM's clinical facilities and medical staff are used in the provision of patient care for enrollees of Partners, but the HMO's practice has no role in the institution's education and research activities. Partners HMO does not directly employ physicians, but contracts with them for provision of care. The majority of the specialty services for which Partners contracts are with WUSM's full-time faculty members. Revenues from Partners HMO represents less than 5 percent of total revenues for WUSM's faculty practice plan. Based on recent history and the

development of the HMO market in St. Louis, it is anticipated that Partners HMO will grow by a minimum of 10 percent per year for the next five years.

For further information, contact Heather Hageman, Planning and Operations Management Associate, Tel.: 314/362-5433; FAX: 314/362-3439; Internet: Hagemanh@msnotes.wustl.edu

Creighton Medical School and Saint Joseph Hospital, Nebraska
Creighton Medical School and Saint Joseph Hospital do not have an HMO sponsored or co-sponsored by the institution, nor do they operate one in a partnership arrangement.

Columbia University College of Physicians and Surgeons, New York
Columbia University College of Physicians and Surgeons does not have an HMO sponsored or co-sponsored by the institution, nor does it operate one in a partnership arrangement.

Carolinas Medical Center, North Carolina
HMOs have been part of the Charlotte Market for 10 years or more, but there has not been any real penetration by managed care until the last few years. Carolinas Medical Center's managed care revenue has never exceeded that of the prior year by more than 20 percent, and, of that, revenues resulting from capitated lives were minimal. For these reasons and others, the institution elected not to form or be partners in an HMO. This is a decision was weighed carefully and may need revisiting in the future, since the institution knows that the State of North Carolina is gearing up for a model Medicaid HMO, targeted for the Charlotte area later in 1996. Since Carolinas Medical Center handles most of the outpatient services, and virtually all of the inpatient care for Medicaid beneficiaries, the institution will need to carefully observe all changes that could have significant financial impact, including a Medicaid HMO administered external to Carolinas Medical Center's system.

For additional information contact: William T. Williams, Senior Vice President, Medical Education and Research, Carolinas Medical Center, Tel. 704/355-3146; FAX 704/355-3039; Internet: drbill@drbill.pdial.interpath.net

Duke University School of Medicine, North Carolina
Duke University Sponsors a managed care organization named WellPath Community Health Plans, in concert with NYLCare (the group health and managed care subsidiary of New York Life). WellPath is a full-service managed care organization with PPO; Point of Service options; and a recently licensed HMO product. Duke and NYLCare have both invested in the organization, and each own 50 percent of its shares. NYLCare and Duke also have equal numbers of seats on the holding company and HMO boards of directors. The plan is not federally qualified. Its provider relationships are predominantly of the "network" model, but there is sufficient variability to make "mixed" the best characterization. The HMO was only

recently licensed and has few covered lives to date. The plan also operates PPO products with approximately 110,000 eligible individuals and provides third-party administrative services for many employers as well. Early enrollment will be commercial only. The business plan calls for Medicare risk product to be added in late 1996 and a Medicaid product in 1997.

Because the HMO is a start-up, there has not been extensive research or educational involvement. A joint venture and NYLCare are providing several managed care medical fellowships for faculty members. Additionally, the plan and NYLCare are working with Duke to make the enrollees of a number of NTLCare plans available to participate in Duke's sponsored clinical trials. Plan and Medical Center staff work through a Managed Care Operations committee to identify issues and opportunities in managing a care of patients provided at Duke.

Duke University Medical Center's facilities and staff are the preferred providers of tertiary services in a 24-county region and have a "centers of excellence" relationship for the balance of the service area. The Medical Center's primary care network is prominently featured in the plan provider network, and Duke affiliated hospitals and their staffs were given priority attention in the network development process. Duke specialists provide consultative clinic services at these affiliated hospitals and work closely with their medical staffs. The business plan filed with the state division of insurance calls for 26,000 commercial members by the end of calendar year 1996 and 111,000 by the end of calendar year 1998.

For additional information, please contact Paul Rosenberg, Tel. 919/419-5001; FAX 919/493-9159. No internet address is available.

East Carolina University School of Medicine, North Carolina

East Carolina University School of Medicine does not have an HMO sponsored or co-sponsored by the institution, nor does it operate one in a partnership arrangement.

University of Cincinnati College of Medicine

University of Cincinnati Medical Center sponsored an HMO, University Health Plan, from 1986 until 1993. In June 1993 the Plan was sold to Blue Cross/Blue Shield of Ohio. In 1995, the University of Cincinnati Hospital entered into an alliance with two other major regional hospital systems. A fourth hospital system joined the alliance in January 1996. The resulting organization, the Health Alliance of Greater Cincinnati, does not currently directly sponsor an HMO, but provides contractual services to numerous providers, including HMOs, in the region.

Oregon Health Sciences University, Oregon

Oregon Health Sciences University (OHSU) is involved in a collaborative effort that operates a fully capitated plan serving clients under the Oregon Health Plan, Oregon's expanded Medicaid managed care program. Oregon's Office of Medical Assistance Programs (OMAP) does not require Medicaid health plan contractors to be state licensed or federally qualified HMOs.

CareOregon, as the plan is called, was formed by the following sponsoring organizations: OHSU, Multnomah County Health Department (MCHD), and the Oregon Primary Care Association (OPCA). OHSU is the state's only health university and major teaching facility, MCHD operates numerous primary care clinics throughout the county (the Portland metropolitan area), and OPCA represents 40 Community, Migrant, and Rural Health Clinics throughout the state. CareOregon was formed by these traditional safety net providers as Medicaid reforms were implemented, to ensure that the institution would continue to serve its Medicaid and uninsured patient base. Legally, the OMAP contractor is Multnomah County dba CareOregon. However, the Multnomah County Board of Commissioners has delegated routine oversight of the plan to an Advisory Board that has membership designated by each of the three sponsors listed above.

The model is mixed. In the Portland metro area, the major providers are the MCHD clinics that are staff model, and the OHSU-affiliated faculty, who participate through University Medical Group, which is an MSO. There are also individual specialist contracts. In the rural areas, again, most primary care physicians are staff model clinics, but most specialists are on individual contracts. Current enrollment is approximately 24, 000 members, all of whom are Medicaid eligible. The HMO facilities are the primary providers of clinical services, but OHSU is very interested in maintaining positive referral relationships with the Multnomah County Health Department and the Oregon Primary Care Association clinics. A current project that has been facilitated by CareOregon relationships is the development of telemedicine capabilities in some of the OPCA-related rural clinics. This can be used to support clinical and educational activities. OHSU also has an active role in the statewide AHEC program, and in most cases, the providers who participate in the education of residents also serve CareOregon patients.

All OHSU facilities and faculty provide services to CareOregon's clients. OHSU assumes full risk for hospital and hospital related services (IP and alternatives such as SNF, Home Health/DME, outpatient surgery, etc.). OHSU's physicians provide primary care on a capitated basis, and specialty care on a fee-for-service basis, and share in the risk associated with surpluses or deficits in the ancillary and specialty services pools. OHSU and UMG hold provider contracts with Multnomah County dba CareOregon directly.

Unfortunately, our growth projections for CareOregon in its present configuration are flat. OMAP has recently responded to state budget pressures by limiting eligibility for Medicaid and imposing premiums on enrollees, which is already begun to shrink the overall size of the market. CareOregon has consistently held 8 to 9 percent of the statewide market since inception in February 1994, and approximately 20 percent of the metro market.

For further information, please contact Sandy Leybold, Tel. 503/494-2466; FAX 503/494-1293; Internet: leybolds@ohsu.edu

Medical University of South Carolina, South Carolina

Medical University of South Carolina does not have an HMO sponsored or co-sponsored by the institution nor does it operate one in a partnership arrangement.

Dallas County Hospital District, Parkland Memorial Hospital, Texas
Parkland Memorial Hospital does not have an HMO sponsored or co-sponsored by the institution, nor does it operate one in a partnership arrangement.

University of Texas Medical Branch, Texas
The University of Texas Medical Branch (UTMB) has the largest statewide physician network in Texas, and including correctional managed health care contract with the State of Texas, it operates one of the largest HMOs in the nation. UTMB's involvement with commercial managed care began in 1994-1995, with a contractual arrangement with a commercial HMO to provide full-risk capitated health services in a seven-county area that includes Galveston County. A special Department of Managed Care was formed to coordinate UTMB's introduction to the commercial managed care market, and one of the department's first projects was the development of a Utilization Review system guided by reference to computerized, specialty board-approved, national clinical practice protocols. This system was further strengthened and directed by a team of physicians who meet weekly to monitor the overall Utilization Management process. UTMB Managed Care offers three products: a Medicare managed care product (Secure Horizons); an employee benefits package; and a commercial managed care product in conjunction with PacificCare Health Systems.

In just two years, UTMB's Managed Care ventures have produced health services contracts exceeding $260,000,000, that pay outside physicians $50,000,000. UTMB Managed Care continues to expand both within its county and adjoining counties within a 100 mile radius, and revenues are expected to grow to $300,000,000 within the next 18 months. The institution is also under consideration for a Medicaid contract, which will add another $100,000,000 in revenue. Overall, UTMB Managed Care is creating accessible, cost-effective health care without diminishing the quality associated with the institution's name. Realizing its potential both as a center for managed health care education within the university's medical and allied health schools and as a source of community knowledge about managed care, UTMB is a good example of the future of academic health care centers' relationships with commercial managed care.

For additional information contact: Leon Clements, Associate Vice President for Managed Care, Tel. 409/747-2600; FAX 409/765-5968. No internet address is available.

University of Washington School of Medicine, Washington
The University of Washington does not have an HMO sponsored or co-sponsored by the institution, nor does it operate one in a partnership arrangement.

REPORT OF THE COUNCIL ON MEDICAL SERVICE

CMS Report 1 - A-95

Subject: Trends in the Organization of Health Care Delivery Systems and the Influence on Physicians' Practices (Resolution 813, I-93)

Presented by: T. Reginald Harris, M.D.

Referred to: Reference Committee G
(Philip E. McCarthy, MD, Chair)

At the 1994 Annual Meeting, the House of Delegates adopted the recommendations in Council on Medical Service Report 6, which discussed a number of issues surrounding the corporate status of managed care plans, with a request that the Council "continue to study recent trends in managed care, including relevant issues related to corporate structure, for-profit status and medical industry mergers." At the same meeting, the House adopted the recommendations in Council on Medical Service Report 2, which discussed the American Hospital Association's (AHA) plan to expand the hospital's health service role through regionalization and vertical integration, with a request that the AMA continue its "study of the implications and results of 'vertical integration' by hospitals to include purchasing of physicians' practices, placing doctors on salary to continue practice, potential conflicts of interest and the corporate practice of medicine."

A related and more narrow issue was raised in Resolution 813, introduced by the Pennsylvania delegation, which was referred by the House of Delegates at the 1993 Interim Meeting. Resolution 813 (I-93) calls for the AMA to amend Policy 160.960 by addition and deletion to read as follows: "When a private medical practice is purchased by corporate entities, patients going to that practice should be informed of this ownership by the ~~corporate entities~~ physician."

The issues raised in Resolution 813 (I-93) and the follow-up studies to Council on Medical Service Reports 2 and 6 (A-94), are all related to the more general issue of trends in the organization of health care delivery systems and the influence on physicians' practices. Accordingly, the following report summarizes the benefits and costs, prevalence, and implications of integration of physicians and hospitals, and of the corporate ownership of health care systems.

PHYSICIAN-HOSPITAL INTEGRATION

Defining Integration

Consolidation among health care providers has attracted significant attention in recent years, and by some counts, the rate of development of integrated delivery systems has accelerated. Many view integration as an effective response to competitive pressures and the need for cost-containment. Legislative initiatives which promoted managed competition may have spurred integration, as well.

A common form of provider consolidation, and the focus of this section of the report, is that of integrated physician-hospital networks. The research and trade literature on integrated networks distinguishes between the following types of physician-hospital relationships: management service organizations (MSOs), physician hospital organizations (PHOs), and foundations. In practice, however, the various forms display considerable overlap.

MSOs are corporations that administer managed care contracts and provide claims processing, physician referral and utilization management services to one or more medical practices. A PHO is viewed as an intermediate form of integration between a hospital or group of hospitals and their affiliated physicians. The physicians may participate as individuals or as members of a physician organization such as an Independent Practice Association (IPA) or a professional corporation. Most PHOs focus on integrating the delivery of medical services across physicians, hospitals and ancillary providers and involve the joint ownership of medical practice assets by hospitals and physician groups. The PHO generally has a governance structure that provides for physician participation in hospital management, as well as administrative participation in the management of clinical-medical staff activities. The PHO may serve to coordinate contracting with managed care plans or with employer groups. It may also own a managed care plan or ambulatory center, or develop and administer insurance products. The wide spectrum of arrangements that are included under the PHO umbrella make it difficult to characterize the extent to which such organizations are, in fact, becoming more integrated. Notably, the Federal Trade Commission and the Department of Justice have refrained from drafting antitrust guidelines for PHOs largely because of the variations in their financial and legal organization.

A foundation is a highly integrated organizational form. It is usually organized as a not-for-profit corporation, and frequently is a hospital affiliate or subsidiary. The foundation owns the assets of medical practices, including their facilities and equipment. Non-physician personnel are typically employees of the foundation. Physicians are usually organized as a separate professional corporation and contract with the foundation to provide services. The foundation is an intermediary that executes managed care contracts for the physicians and the hospital.

Benefits and Costs of Integration

Changes in the physician marketplace have focused attention on increased vertical integration. The motivation for provider and facility integration is a desire or, in some cases, a need to increase the profitability of the joining parties, a goal obtained through improvements in efficiency and efficacy, greater market power, access to capital markets, and certain tax advantages.

Economic theory suggests that integrated networks may have several advantages over individual practitioners for competing in an increasingly competitive, cost-conscious environment. These advantages center on: (1) the reduction of administrative costs; (2) the presence and alignment of incentives for controlling costs throughout the continuum of care; and (3) a superior ability to manage and spread risk. Case studies of PHOs also frequently cite the following rationale for undertaking physician-hospital joint ventures:

- To facilitate "one-stop" contracting with managed care organizations and employers. Integration can potentially increase the bargaining power of providers.

- To improve continuity of care and to facilitate moving patients from the hospital into more cost-effective treatment settings. Integrated networks facilitate alignment of financial incentives between physicians and hospitals to permit the respective parties to mutually benefit from improvements in the delivery of care.

- To increase patient referrals and revenue sources. Hospitals facing declining occupancy rates may find it advantageous to develop organizational and contractual ties with primary care physicians, who act as gatekeepers under managed care, in an attempt to influence the choice of hospital and the use of specific services.

- To improve risk bearing. A capitated network that spans a larger volume of patients and a comprehensive range of services is generally more diversified and is better able to bear risks that are related to the unexpected fluctuations in the frequency and severity of illnesses incurred by the covered patient population.

Despite the potential benefits, integration generates costs, as well. Evidence suggests that there are limits to managerial and organizational economies of scale. At some point, the costs of increasing layers of management and the resources dedicated to internal information systems begin to rise sharply, thereby out-stripping efficiency gains realized elsewhere in the organization. Large networks may dilute incentives for cost-conscious behavior of individual physicians in the network. On the other hand, large networks may be more successful in implementing other systems within the network for reinforcing these incentives.

Evidence of the Rate of Growth and Prevalence of Integration

Data on the extent and nature of integration in the health services industry are limited because the integrated arrangements often involve organizations for which data are collected independently, e.g., hospitals and physician group practices. In addition, much of the data gathered may not be representative of the current marketplace and may be adversely affected by less than optimal sampling procedures. Nonetheless, the Council has attempted to examine data on the extent of integration in the health services industry from a number of different sources.

Although PHOs currently make up a small segment of the health care marketplace, evidence suggests that there may be substantial growth in the short-term. Data from the AMA's 1994 Socioeconomic Monitoring System (SMS) survey show that fewer than one percent of patient care physicians are currently in integrated practices in which a hospital has an ownership interest. Approximately five percent of physicians responded that during the past year they were approached by a hospital with an interest in acquiring an ownership stake. These figures may understate the extent of physician involvement with PHOs, however, because PHOs typically involve hospital ownership of some fraction of practice assets. The SMS questions specifically referred to hospital ownership of practice assets and, therefore, may not have captured physicians who are part of PHOs in which there is no direct hospital ownership.

In 1993, Witt/Kiefer surveyed a total of 137 hospitals, 56 multi-hospital systems and 135 group practices throughout the US regarding their current and planned involvement with integrated delivery systems. Of the respondents, 56% of the hospitals, 77% of the multi-hospital systems and 45% of the medical groups indicated that they currently participate in some form of an integrated delivery system (IDS), or plan to have such a delivery system in place within 12

months. An IDS was defined to include a PHO, MSO, "integrated provider organization" or "other form of organization". With respect to PHOs, 46% of the hospitals, 46% of the multi-hospital systems and 30% of medical groups indicated existing or planned ventures. It should be noted, however, that the majority of the ventures tallied above were in various stages of planning. In addition, the survey was biased toward over-representation of larger organizations, and the extent of physician participation in the activity is not known.

In March 1993, Ernst & Young surveyed the chief executive officers of 3,000 acute-care hospitals. The 507 respondents were representative of the hospital population in terms of geographic location, tax status and academic affiliation. Results of the survey suggested that 11% of hospitals had formed a PHO at the time of survey and another 34% had "planned" to develop a PHO within the next 2 years. Again, there is no indication of the size or scope of activities in place or planned. Forty-five percent of the respondents indicated that they had purchased or created physician practices within the previous 2 years and that, on average, the acquired practices had a total of 30 physician-positions.

Finally, the AMA 1994 SMS survey data provide another indication of physician integration activity: the percentage of all physicians who were self-employed and in solo practice fell from 37 percent in 1990 to 29 percent in 1994.

Unfortunately, because integrated delivery systems are quite new, there is no systematic evidence available for evaluating the factors that contribute to their success or failure. Limited case studies of PHOs have suggested that placing both the physicians and the hospital at financial risk tends to discipline all parties to the contract and assures that the venture receives serious, ongoing attention. Case studies also emphasize the importance of good management, active physician participation in decision-making, and a jointly developed strategic plan and review process which includes measurable performance standards and contingency plans.

Implications for Physicians: Structure, Control and Risk

Among the implications for physicians who integrate their practices with hospitals and/or other organizations are the new dependence on the performance of the larger entity and possibly new payment mechanisms, such as capitation, as well as the potential narrowing of clinical autonomy and the reorganization of practice support staff. As part of an integrated system, the physician must regard the financial impact of treatment decisions on not only the practice, but also on the larger integrated organization as a whole. Similarly, in situations involving referral to ancillary facilities, the financial incentives presented by an ownership arrangement could potentially bias a physician's behavior. Thus, the integrated system inherently involves a tradeoff between increasing the control of health services (and costs) and clinical autonomy.

Along with the potential financial gains to be made through an ownership interest, the physician's practice behavior is also influenced by the specific mechanism for payment of services. Under capitated arrangements in which a physician receives a fixed amount for each patient, the physician usually has an increased incentive to reduce utilization of health care services. Similarly, if the physician is compensated based on the profitability of the enterprise, (e.g. receives a commission or bonus), the physician may be more likely to refer patients to the hospital. Although the potential concerns arising from these payment arrangements are genuine, there is no conclusive evidence that such arrangements result in significant differences in

utilization. Similarly, no conclusion can yet be drawn regarding the tendency for under- or over-referral resulting from different ownership arrangements.

Integrating parties, in their efforts to control utilization and costs, may turn to managed care measures, such as practice parameters and utilization review. Accordingly, integration may be associated with a perceived reduction in clinical autonomy, and the potential to adversely affect the patient-physician relationship. Patient satisfaction and confidence can be eroded if the physician does not effectively maintain substantial control over clinical decisions. It is the policy of the AMA that hospital-physician business relationships must be based on mutual respect and shared incentives, and that hospital programs should be developed that provide medical staff physicians with incentives to render high quality medical care in an effective and efficient manner and leave physicians in control of the clinical aspects of that care (Policy 285.988, AMA Policy Compendium). Furthermore, if a physician must alter certain practices, such as referral behavior, patients may be inconvenienced, and complain. For these reasons, it is important that physicians maintain control of the medical decision-making, and that ownership arrangements be made clear to patients.

An ownership change also has the potential to disrupt the physician's normal, every-day operations. This disruption extends beyond the influence of change on medical decision-making, into physicians' relationships with their patients. A physician's patient base may effectively become the hospital's patient base, thereby weakening patient loyalty to particular physicians. The physician's support staff also may be reorganized as certain functions are merged across the integrating parties.

The determination of who controls medical decisions is especially important as it relates to concerns about professional liability. In an integrated relationship, a physician's services and actions increasingly may be called in to question by new partners. Physicians are generally held responsible for adverse outcomes that result from negligent clinical decision-making or practices. Nonetheless, because other organizations are seeking greater control of utilization, the law is being reevaluated in light of the fact that this control influences clinical decision-making and practices.

Resolution 813

Resolution 813, which was referred at the 1993 Interim Meeting, raises concerns that while current AMA policy requires a corporation to provide patients with notification of ownership structure, it also should be incumbent upon the physician to discuss this arrangement with patients. AMA policy addresses physicians' responsibility for disclosure to patients of interest in a medical or other health care facility (Policy 140.984), but has not imposed similar physician disclosure requirements in the case of corporate ownership of physicians' practices.

As noted previously, there is no conclusive evidence in the literature that specific ownership arrangements result in significant differences in utilization. However, since the behavior of the physician could potentially be influenced by such financial incentives, the policy amendment proposed by Resolution 813 (I-93) would obligate the physician to inform patients of the ownership arrangement and specific reimbursement mechanisms in place at the outset of their treatment, allowing for more informed decision-making throughout the course of care.

The Council believes that such a policy change may impose on some physician practices additional administrative and/or time burdens on the physician in communicating this information to his or her patients. The sponsor of Resolution 813 (I-93) indicated a willingness to allow for more flexibility in the area, by modifying Policy 160.960 to call for informing patients of such ownership arrangements by either the corporate entity or the physician. The Council believes that such a modification would be appropriate.

THE CORPORATE STATUS OF MANAGED CARE PLANS

Defining Corporate Status/Tax Exemption

The Internal Revenue Service's statutory provision for tax exemption requires that an organization be operated for "religious, charitable, scientific, testing for public safety, literary, or educational purposes." The statute does not explicitly mention hospitals or other health care institutions, but these organizations have traditionally qualified for tax exemption under the word "charitable". With regard to not-for-profit health care providers, current Internal Revenue Service (IRS) rules only require that these organizations provide emergency care to those unable to pay.

In recent years, the tax-exempt status of not-for-profit hospitals has been challenged in at least 20 states, and legislation imposing more specific criteria for exemption has been introduced in Congress and in several state legislatures. Some argue that there should be demonstrable evidence that organizations are earning their tax-exempt status by meeting a need not already being met, providing services at below cost for low-income patients, or targeting underserved areas for needed service. The Massachusetts State Attorney General, for example, has issued voluntary hospital charity care guidelines that recommend hospitals spend a "reasonable" amount in their communities on various programs for the public good. The state of California has enacted legislation which requires certain conditions to be met for a not-for-profit corporation to convert to a for-profit corporation. Similarly, the Texas state legislature recently passed a bill that mandates a certain level of charity care to be provided by hospitals, allowing them a choice of formulas. "Charity care" is specifically defined as caring for the economically indigent or medically indigent, such as those who have spent down to eligibility for Medicaid.

Recently, the American Institute of Certified Public Accountants opposed the development of charity care standards for determining the eligibility of health care service organizations for tax-exempt status. At issue is how to measure the ability of the institution to provide the care, which is difficult to enforce uniformly.

Benefits and Costs of Conversion to For-Profit Status

In the current environment there are many views as to how hospitals, physicians, insurers, and managed care organizations might position themselves to be competitive. There is a trade-off between the tax advantages of not-for-profit status and the access to capital markets resulting from a for-profit conversion. For many HMOs, the for-profit decision also depends upon the state laws concerning for-profit medical groups and federal restrictions on grants to for-profit organizations. The current level of activity in the industry suggests that many feel integration and consolidation are essential for survival. With the future of the health care industry uncertain, some believe that access to capital markets is necessary to maintain competitiveness.

The process of conversion is expensive and extremely complicated. Nevertheless, Washington-based consultant Gerald L. McManis, quoted in Hospital and Health Networks (July 15, 1994), says providers that want to be in charge of their networks will need "deep pockets" to assume and manage the risk of covered lives. Not-for-profits can assume this risk by changing status and going through capital markets or by partnering with a for-profit company." In his view, "for-profit and not-for-profit status is a tactic, not an end," dependent primarily on the financial capacity needed. If conversion is expensive, then the recent increased trend toward HMO conversions suggests that these companies expect significant gains from the process.

The conversion of some not-for-profit HMOs to for-profit status has been closely examined by the IRS because of reports that the managers of HMOs are receiving large financial gains as a result of the transitions (Bureau of National Affairs' Health Policy Report, August 1994). In 1988, three Southern California physicians filed a class action suit against the management of Inland Health Plan for fraud and racketeering charges. It was alleged that the executive director of Inland Health Plan made over $11 million when management converted the not-for-profit HMO to a for-profit entity and subsequently sold it. In 1991, there were widespread reports that the management of HealthNet (California) was in a position to make over $300 million in converting HealthNet from a not-for-profit to a for-profit business. Although these well-publicized cases of large financial gains to management executives certainly raise concern, such a high level of profits is not necessarily representative of all conversions. In many cases, it is difficult to assess the size of the gains from conversion without sufficient data on the distribution of the shares, and the pre- and post-conversion values.

Evidence on the Prevalence of For-Profit Managed Care Organizations

The HMO industry has been consolidating since the mid-1980s, decreasing the total number of plans. The peak year for the number of HMO plans was 1987, when there were 707 in operation, and another 30 under development. At the end of 1993 there were 545 plans in operation, covering 19% of the insured population nationwide. While the number of plans is diminishing, HMO enrollment has grown steadily from 40.5 million in 1991, to 43.7 million in 1992, to 45.2 million in 1993.

One striking feature of the industry consolidation has been a trend toward for-profit corporations. In the mid-1970s there were fewer than 20 for-profit HMOs. That number rose to about 100 in 1984, accounting for one-third of the industry. In 1992, 382 HMOs were for-profit organizations, representing 68% of the industry. In nine states, the only HMOs in operation in that year were for-profits, while not-for-profits had the majority of the market in just nine states. The shift toward for-profit status is apparent in the enrollment data as well. For example, between 1988 and 1991, total enrollment in for-profit HMOs grew over 14%.

Six of the seven fastest-growing HMOs in 1993, both in terms of revenues and enrollments, were for-profits, each with five-year growth rates exceeding 270%. Not-for-profit HMOs still dominate the list of largest HMOs in revenue and enrollments, but these organizations exhibit much smaller growth rates, on average. Not-for-profit HMOs are typically at least 15 years old, have 250,000 or more members, and are staff-model HMOs. Of the 110 not-for-profit HMOs in 1992, 38 were affiliated with Blue Cross/Blue Shield companies, 40 were independent, 12 were owned by Kaiser Foundation, and 20 were affiliated with cities, counties, or universities.

As previously reported by the Council, a notable example of an HMO for-profit conversion involved the corporate restructuring of Blue Cross of California (BCC) in early 1993. A restructuring of the company involved maintaining the not-for-profit status of BCC, while creating a number of for-profit subsidiaries. More than $400 million dollars were raised from the initial public offering of shares in WellPoint Health Networks, Inc., the new core managed care company. BCC also avoided a California law that requires corporations converting to for-profit status to donate a portion of their assets, or an equivalent amount of money, to a charitable or public purpose. BCC was criticized for its actions and prompted to compensate the public for the tax-exempt status it had while it built the business. In response, BCC announced plans to create the California HealthCare Foundation, a public charity with assets of more that $2 billion to fund health programs in California (American Healthline, 1994).

In response to the restructuring of BCC, the California Medical Association (CMA) sponsored a bill to require that restructured companies preserve the charitable assets of the transferring corporation and maintain the same level of corporate charitable expenditures as they expended prior to the conversion (CA AB 1784). The bill did not pass in the California legislature, primarily because ongoing negotiations with BCC reduced the urgency of the bill. More recently, a bill was introduced in the California Senate that would "require every nonprofit health care service plan to annually submit for review a public benefit program that identifies the activities to be undertaken by the plan to meet its nonprofit public benefit obligations", and any nonprofit plan that intends to restructure "in a manner that involves substantial for-profit activities to submit a similar public benefit program for approval by the Department of Corporations" (CA SB 445).

Implications for the Cost and Quality of Health Care

The Council on Medical Service believes that some aspects of the health care delivery system may be better served by organizations whose performance is not tied too tightly to economic incentives. The needs of patients should be of primary concern, with financial considerations secondary. For-profit organizations may be more efficient because management has a financial incentive to operate efficiently. Not-for-profit firms may be more likely to regard patients' interests first because they do not have to produce a profit to satisfy shareholders. As noted in earlier Council reports on this issue, however, there is no guarantee that managers of not-for-profit firms will use their profits to benefit patients. Managers may use these profits for their own benefit by securing high salaries, lavish offices, or luxurious travel. Nonetheless, to be viable competitors in the industry, not-for-profits must perform on par with for-profits or face a takeover threat. Efficiency differences between legal forms are also influenced by other characteristics of the HMOs, including the scale of operations, enrollee demographics, and services provided.

Although there has been considerable research comparing the performance of for-profit and not-for-profit health care institutions, it does not provide conclusive evidence that either legal form has intrinsically lower costs or higher quality. Furthermore, the results can not necessarily be extrapolated to the general managed care industry. The main barrier to research comparing legal forms in the managed care industry has been a lack of comprehensive data. Only a few studies have been published to date, all based on small samples of HMOs.

One common measure of comparison in the managed care industry is utilization. Measures typically used to assess utilization in HMOs include hospital inpatient days per 1,000 enrollees, physician visits per member, outpatient visits per member, and average length of stay. Descriptive statistics published by the Group Health Association of America (GHAA) indicate that:

- In 1990 the reported number of inpatient days/1000 was higher for for-profit HMOs (424 versus 384 for not-for-profit HMOs), but the difference was somewhat smaller in 1991 (395 versus 356).

One 1992 study compared utilization differences across 70 HMOs in the state of Illinois. DeBrock and Arnould tested the influence of HMO age, payment arrangements, ownership, and physician financial incentives, among other things. The results indicate that not-for-profit status is associated with higher utilization — not-for-profit plans experience about 18 percent higher levels of hospital admissions per 1000 enrollees.

Another study of 163 HMOs compared rates of return on assets, and found no significant difference between for-profit and not-for-profit HMOs (Bryce, 1994). The author explained that methods of cost control and accounting, operational incentives and constraints, and price determination all serve to equate the profits of the two legal forms. The analysis, however, did not control for any characteristics of the HMOs except for the legal status.

Data published by the GHAA also reveal that not-for-profit HMOs report a slightly larger share of expenses on health care (90.8% versus 85.8% for for-profit HMOs in 1991) and a smaller share of expenses on administration (7.6% versus 12.8% in 1991). The authors of a multivariate analysis of the costs and revenues of 173 HMOS, however, paint a different picture (Schlesinger, et al. 1986). Their study controlled a number of factors, including type of HMO (group, IPA, staff model), age of plan, competition from other HMOs in the area, and proportion of Medicare enrollees. Their results suggest that for-profit HMOs have higher costs per enrollee, mainly due to higher ambulatory costs. There were no significant differences between the legal structures in administrative or hospital costs per enrollee, and only a small difference between the legal forms in terms of revenues per enrollee. The results of the study suggest that for-profit HMOs are more costly than not-for-profits, but that they do not pass on their costs to consumers. The concern raised by the authors is that if for-profits are more costly, then the trend toward for-profits implies an increase in health care costs. This concern may be unfounded, however, as some of cost differences may be due to organizational/growth expenses that may decline over time.

For the past two years, the California Medical Association (CMA) has prepared a report based on the financial information from 41 HMOs in California. In both annual reports (based on data from fiscal years 1992/1993 and 1993/1994) the CMA found that for-profit HMOs spend a smaller share of premium dollars on medical care compared to their not-for-profit counterparts. A correspondingly larger share of premium dollars is paid by the for-profits for administrative expenses. These facts are consistent with the figures reported by the GHAA, but must be qualified for at least two reasons. First, not-for-profit plans have more enrollees, on average, than for-profit plans. They may, therefore, have lower administrative costs per member due to economies of scale which would also tend to reduce their administrative expense ratio. Second, a large share of the for-profits' administrative expenses are start-up costs which may decline in

future years. While the experience of a sample of California HMOs may not be representative of the country as a whole, the data presented by CMA suggest that the health plans with the lowest healthcare expense ratios have correspondingly higher ratios of both administrative expenses to revenues and profits to revenues.

Ten California HMOs also were surveyed recently by the Bay Area Business Group on Health (BBGH). The survey asked enrollees of HMOs to rate their plans in four general categories: the health plan, physician services, hospital services, and health improvement programs. The BBGH reports that the average consumer satisfaction rating is higher among the plans with higher expenditures on medical care.

The last two studies focused on a different aspect of HMO performance, therefore limiting their ability to provide conclusive evidence of differences between the organizational forms. Although it appears that cost differences may exist, there is reason to believe such differences may be eroded over time. In addition, none of the studies provide any direct evidence of the influence of conversion to for-profit status on the quality of patient care.

Implications for Physicians

There are several implications for physicians arising from the recent trend of conversions. The first consideration is the effect of the conversion on the provision of charitable services, the basis for the tax-exempt status that was maintained previously. Both legal forms can earn revenues in excess of total economic costs, but not-for-profits are not allowed to distribute such returns to investors, and hence are expected to roll profits into charitable operations, medical education, or investment in new equipment, thereby serving the community. Thus, when a corporation converts to for-profit status, one might expect investors to have little interest in maintaining the same level of community service, which would draw from their share of "economic" profits.

There also has been concern that physicians operating under utilization review measures may face increased professional liability risks. Recent court decisions ascribe to the physician the responsibility to protest limitations when his medical judgement dictates that the service is necessary, but the plan has denied coverage. The actual evidence of increased liability risk has been primarily anecdotal. The relationship between managed care contracting and professional liability is not known at this time, nor is there any evidence of the influence of the corporate status of such managed care forms on professional liability exposure.

RELEVANT AMA POLICY AND ACTIVITIES

With regard to the trends in the organization of health care delivery systems addressed in this report, current AMA policy provides adequate guidance for physicians at this time. For example, the following policies specifically address financial incentives and issues involving the control of medical decision-making:

> The AMA (1) opposes physician economic incentives that conflict with patients' welfare; (2) believes the physician must remain the patient's advocate; (3) believes that physicians should not compromise the quality of care they offer their patients in order to conserve costs; (4) believes physicians are entitled to compensation commensurate with services rendered and should not receive income for withholding appropriate care; (5) believes the Physician should not share with the hospital the profit the hospital makes from the physician's patient care decisions; and (6) believes any physician economic incentive plan should be reviewed by the medical staff with assistance of independent legal counsel (Policy 225.986).
>
> It is the policy of the AMA: (1) to continue to oppose organizational structures that may lead to nonphysician control of medical decision-making; (2) that hospital-physician business arrangements must be based on mutual respect and shared incentives; hospital programs should be developed that provide medical staff physicians with incentives to render high quality medical care in an effective and efficient manner and leave physicians in control of the clinical aspects of that care; and (3) to encourage individual physicians and hospital medical staff to remain alert to, and oppose, efforts by hospitals or insurers to obtain control of medical practices through the employment of physicians (Policy 285.988).

Building on the policies, the Council on Ethical and Judicial Affairs recently studied the ethical implications for physician practices in managed care arrangements. Council on Ethical and Judicial Affairs Report 13 (A-94) outlines specific principles that should be followed when managed care plans offer financial incentives to limit care, or place restrictions on the care that physicians in the plan may provide to their patients. Specifically, Policy 285.982 [1] from that report states:

> The duty of patient advocacy is a fundamental element of the physician-patient relationship that should not be altered by the system of health care delivery in which physicians practice. Physicians must continue to place the interests of their patients first (Policy 285.982 [1]).

As described in Board of Trustees Report 31 (I-94), as well as in a status report before the House of Delegates at this meeting, the AMA has taken a number of actions designed to assist physicians with the increasing prevalence of managed care. Many of these actions also will be useful to physicians considering integration. Specific AMA programs providing assistance to physicians include the Doctors Advisory Network, the Legal Issues Hotline, and the Physicians Capital Source program, which provides assistance with business plan development and access to financing sources for physicians interesting in obtaining capital for business expansion. The AMA also has recently established a task force with the AHA to discuss issues of common concern, including vertical integration.

DISCUSSION

Changes in structure and ownership arrangement correspond with potentially drastic changes in the control of medical decision-making and financial incentives. Such changes may be necessary in an increasingly competitive health care industry to meet new requirements for

reducing health care spending and increasing the quality of medical care. However, these changes involve serious consequences for physicians and their practices.

Health care delivery systems come in many forms, most of which are quite new. Thus, the Council believes it is unlikely that there will be any systematic evidence available for evaluating their success for some time. Limited case studies and surveys provide a glimpse of what is occurring in the marketplace, but do not provide an indication of the long run efficiency and efficacy of these systems. Neither do they suggest that any particular form will dominate. These changes are occurring so rapidly that it is a daunting task even to describe the current market structure; any survey conducted today may be completely off the mark in a few months. In addition, national figures tend not to be as informative for many regions or states because their individual experiences vary substantially.

The increasing trend in conversions of not-for-profit HMOs to for-profit status calls for additional scrutiny of the benefits derived from tax-exempt status, and the gains to be made through conversion. A lack of data on HMOs currently makes empirical assessments impossible. It remains to be seen whether one legal form dominates another in terms of quality of care or cost efficiency. The Council believes that continued study in this area is of critical importance.

As indicated in its Report 6-A-94, the Council concurs with legislative efforts to require restructured not-for-profit companies to preserve the charitable assets of the transferring corporation and to maintain the same level of corporate charitable expenditures as they expended prior to the conversion. The Council believes that AMA model state legislation recently drafted to address this issue should be reaffirmed and redistributed to the Federation. It is important that adequate measures are undertaken to assess the value of the charitable assets and the level of corporate charitable expenditures of not-for-profit HMOs prior to conversion. Assessments of pre-conversion value would be facilitated by requiring all health plans to submit reports of their charitable assets and expenditures. The focus of several reform proposals on establishing qualifying criteria for tax exemption reflect a need to clarify the future role of not-for-profits in health care, generally.

Changes in the organization of health care delivery systems involve a host of new opportunities for physician involvement. Physicians must prepare for new ventures with adequate information on all parameters of any new arrangement, including the realm of physician control, financial and legal obligations. Through new actions and programs, the AMA is prepared to guide physicians through these organizational transitions. The Council on Medical Service will continue to monitor trends in the organization of health care delivery systems and will report further to the House of Delegates as appropriate.

RECOMMENDATIONS

The Council on Medical Service recommends that the following be adopted in lieu of Resolution 813 (I-93) and the remainder of this report be filed:

1. That AMA Policy 225.986, emphasizing the physician's role as patient advocate and opposing physician economic incentives that conflict with patients' welfare, be reaffirmed.

2. That AMA Policy 285.988, emphasizing hospital-physician business arrangements based on mutual respect and shared incentives, and opposing organizational structures that may lead to nonphysician control of medical decision-making, be reaffirmed and strongly advocated.

3. That AMA Policy 160.960 be modified to read "When a private medical practice is purchased by corporate entities, patients going to that practice should be informed of this ownership arrangement by the corporate entities and/or by the physician."

4. That the AMA continue to study the benefits and costs of integration and the factors that contribute to the success or failure of an integrated delivery system.

5. That the AMA encourage compilation of information on the proportion of premium dollars spent on medical care across different types of health plans, and make this information available to physicians and the public as an additional resource in health care purchasing decisions.

6. That the AMA continue to evaluate the comparative benefits of tax-exempt versus for-profit status of health care plans, and make this information available to physicians.

7. That AMA model state legislation governing health plan conversion to for-profit status be reaffirmed and redistributed to national medical specialty societies and state medical associations.

REPORT OF THE BOARD OF TRUSTEES

B of T Report 27 - A-95

Subject: Direct Contracting with Employers: A Strategy to Increase Physician Involvement in the Current Health Care Market

Presented by: P. John Seward, MD, Chair

This report describes and analyzes the ability of physicians or physician-sponsored networks in the current U.S. health care market to compete with insurers by selling their services directly to employers -- thus circumventing the insurance broker and saving administrative costs. The report provides an explanation of what direct contracting is and how it operates to allow physicians to contract directly with a self-insured employer benefit plan to provide health care services to employees. The report examines a variety of existing employer direct contracting programs, focusing on how these plans operate administratively, affect health care costs, and are viewed by patients and participating physicians.

The report also provides background on the legal framework of the Employee Retirement Income Security Act of 1974 (ERISA), the federal statute which places minimum standards on employee benefit plans and facilitates direct contracting arrangements with physicians. The report discusses current case law and the implications for direct contracting arrangements as state insurance regulators seek to gain control over certain risk-bearing contracts between provider groups and ERISA plans on the grounds that such contracts essentially become insurance.

The report also assesses the ability of physicians in various markets to effectively utilize a direct contracting approach and summarizes recommendations for the AMA to consider in pursuing strategies to encourage physician understanding of and participation in direct contracting arrangements.

I. Employer Health Insurance Costs and the Rise of Self-Insurance

The growth in health care expenditures throughout the 1980s and the early 1990s, both in the United States and in other industrialized countries, has been well-documented. Ian Morrison of the Institute for the Future, in tracking employer spending for all forms of employee compensation between the years 1970 and 1989, found that employer expenditures (spending per fulltime equivalent employee in constant 1989 dollars) for wages and salaries increased by only 1% overall between 1970 and 1989. In contrast, employer spending for employee health benefits increased 163%.

In 1991, the United States spent more on health care than any other industrialized nation. S. Letsch, et al, in "National Healthcare Expenditures, 1991," Health Care Financing Review, Winter, 1992, reported that 13.2% of the U.S. Gross Domestic Product (GDP) ($752 billion) was expended on health care. The study also reported that per capita spending in the U.S. during 1991 was $2,868. In contrast, health expenditures in other industrialized countries averaged 7.6% of GDP, while per capita spending was $1,305 (G. Schlieber, et al. "Health Spending, Delivery and Outcomes in OECD Countries," Health Affairs, Summer 1993.

The continuing upward spiral in health care costs for employees was not lost on employers. By the mid-1980s, the AMA and other provider groups were noting in Congressional testimony that employers were increasingly seeking to reduce employee health insurance costs by forming self-funded or self-insured plans under ERISA.

Self-funding or self-insurance describes an employee health care program in which employers fund benefit plans from their own resources without purchasing insurance. Self-funded plans primarily use two funding sources -- either a general asset plan or a trust established under Section 501(c)(3) of the Internal Revenue Code. These plans may be self-operated or administered by a third party administrator (TPA) who performs claims processing, employee communications, and other administrative tasks. These administrative arrangements are also known in the insurance industry as administrative services only (ASO) plans.

Self-insured arrangements are often confusing to patients and physicians because the funding mechanism is indistinguishable from the insurance company that merely administers the self-insured plan or processes its claims. Blue Cross/Blue Shield, Aetna, and other insurers which provide traditional insurance products and contracts for employers, also frequently serve as TPA or ASO plans for self-insured employers. These TPA/ASO plans may be called a Blue Cross/Blue Shield PPO or similarly named product, so the legal and business differences between a self-insured plan, (which is subject to ERISA), and an insured plan (which is subject to state law), are not apparent.

Employers who self-fund also generally limit their liability via stop-loss insurance on an aggregate and/or individual basis. Frequently that stop-loss insurance is purchased from the insurer TPA, who may offer to provide the stop-loss insurance at a discount in exchange for the TPA business. Again, this arrangement often appears to be an insurance contract, although courts have held that self-insured plans are not subject to state insurance laws simply because they have purchased stop-loss insurance for their self-insured plans. The prevalence of self-funded plans must be recognized by physicians because their legal and business framework greatly encourages direct contracting relationships, and, generally, poses few regulatory barriers under current case law.

Physicians must understand the dynamics of direct contracting with self-insured plans because these arrangements offer a strategy to compete effectively with larger insurance competitors in certain markets and maintain physician control without necessarily having to develop a costly HMO or insurance plan corporate structure. Rather, as the report discusses below, physicians in many markets may be able to contract individually with self-insured employers or form networks to form partnerships with these employers.

One market certainty supporting this concept is that self-insured employee health benefit plans

have multiplied dramatically in the last decade for a number of reasons, discussed below. The 1992 Foster Higgins Health Care Benefits Survey reported that self-insured plans increased from 30% of all employer plans in 1979 to 51% in 1983. By 1992, 67% of employee benefit plans were self-insured.

Figures from the Self-Insurance Institute of America (SIIA), a national trade association that serves employers, third party administrators, and re-insurance companies, and from the Coalition to Preserve Self-Insurance, a group that includes SIIA, the Health Insurance Association of American (HIAA), and from the National Association of Manufacturers (NAM), confirmed that more than 67% of all U.S. employee benefit plans are self-insured, and 51% of all employed Americans are covered by self-insured plans.

The most recent Foster-Higgins data (1992) found that 83% of all U.S. employers with more than 5,000 employees are self-insured, and nearly 50% of all small employers (fewer than 500 employees) with group medical plans are self-insured. Within U.S. self-funded plans, the majority of employee benefit plans, 79% of plans rely on utilization review services and compare health costs to established norms in managing their health benefit plans, and 73% buy stop-loss insurance to cover major health costs above a certain amount, such as $10,000 per covered person per year (calendar year or illness-to-illness).

All but 8% of self-insured plans rely on TPAs or ASO plans to process claims, utilization review, auditing, and other services. TPAs are often large insurance companies, but a number of smaller TPAs and consultants also provide this service. A 1992 SIIA survey of 1,500 member TPAs found the majority of TPAs serve employer clients with fewer than 250 employees. Of the TPAs surveyed, 51% reported that they served employers between the range of more than 25 but fewer than 250 employees (25 - 49 employees -- 13.09%; 50 - 99 employees -- 17%; 100 - 250 -- 21.2%).

The Foster-Higgins data also showed that administrative costs -- largely the costs of TPAs to administer these self-funded plans -- averaged about 6.1% of total plan costs in 1991. Of employees surveyed by SIIA in a 1993 survey, 94% reported that their employers' self-funded plans processed claims in a timely manner. Of providers surveyed by SIIA, 52% reported that payments were received within two weeks, and 90% reported receiving payments within four weeks. About 5% of providers reported problems with benefits administration.

II. ERISA Facilitation of Direct Contracting Arrangements

Traditionally employee benefit plans have been provided under two mechanisms: Purchase of an insurance contract to cover employees or administration of a self-funded or self-insured plan. The reasons for the emergence of self-insurance are numerous, but directly related to changes in the provision of health care benefits and related costs over the last two decades.

When ERISA was enacted in 1974, at the urging of large interstate employers who did not want to be burdened with 50 different state laws related to health insurance, only a small number of employers were self-insured. The reason for this phenomenon was that most employers then -- and today -- are smaller employers. According to the federal Small

Business Administration, the majority of U.S. employees work for small businesses, defined as those with fewer than 500 employees. Some 33% of all workers are in firms with fewer than 100 employees.

Moreover, as employer-provided insurance became the norm in post-World-War-II America, both smaller and larger employees generally had access to reasonable health insurance policies. According to the Employee Benefit Research Institute (EBRI), the average cost of employer health benefits was $656 per employee in 1970. By 1989, that cost had increased to $1,722.

Rising health care costs and increasing employer sophistication concerning ERISA's legal protections for self-funded plans influenced the decision to self-insure. Section 514 of ERISA (29 U.S.C. Section 1144) includes a sweeping pre-emption clause that exempts self-insured plans from state insurance and other laws related to employee benefit plans. In recent years, courts have held that ERISA pre-empts the application of state laws related to mandated benefits, funding of high-risk insurance pools, hospital surcharges, discrimination against handicapped and ill patients, patient protections such as negligent utilization review laws, and even tort actions for bad faith practices. Moreover, under ERISA's regulatory scheme, beneficiaries who sue plans for negligent utilization review decisions or decisions to withhold care are limited in their remedies. Even when plan UR decisions to withhold care have led to patient mortality and morbidity, courts have uniformly held that the plans themselves are insulated from liability. Corcoran v. United Healthcare, Inc., 965 F. 2d 1321 (5th Cir. 1992); Kuhl v. Lincoln National Health Plan, 999 F. 2d 298 (8th Cir. 1993).

Employers' increasing awareness of the cost control, flexibility, and legal protections offered by self-insured ERISA plans assures that this market will continue to grow. Moreover, some members of Congress have introduced legislation, such as H.R. 995, the "ERISA Reform Act of 1995" that would facilitate accessibility of self-insurance to smaller employers.

While ERISA self-insured plans present policy issues for physicians and patients due to ERISA's weak regulation and patient remedies, these plans also offer opportunities for physicians and physician-formed networks -- especially those willing to accept capitation and other arrangements that require greater provider assumption of risk for patient care management and costs. The ability of physicians and physician networks to provide and manage care better than insurance companies, while also negotiating competitive rates, will allow physician group contracts in many cases to compete for employer contracts more effectively than HMOs or insurance TPAs, especially in markets where managed care has not achieved significant penetration. If the current legal and cost environment remains unchanged, there is little doubt that ERISA self-insured plans will continue to dominate the market and that opportunities for physicians networks to compete with HMOs and other insurance products with large administrative costs will increase.

III. Steps Toward Physician Autonomy Through Direct Contracting

A. The Market for Direct Contracting

Consultants who have worked with physicians, hospitals, and employer to facilitate direct

contracting identify numerous reasons to promote direct contracting in the health care market. Edwin L. Childs, a former hospital administrator and the chairman of Buyers Healthcare Cooperative, has formed smaller employer health care purchasing groups in six states including Indiana, Tennessee, Texas, Arkansas, and Pennsylvania. Childs says employers dislike HMOs because HMOs are costly – requiring large amounts of "float" funding through pre-payments. HMOs "shadow price" based on indemnity payment schedules, but provide less value by cutting patient care costs.

Childs says employers also frequently perceive that HMOs do not allow for adequate employer input, and provide little or no information about actual care provided (numbers of immunizations, mammograms, etc.), patient outcomes, itemized costs, employee satisfaction, and cost containment. Irwin Birnbaum, a partner with the law firm Proskauer Rose Goetz & Mendesohn in New York, and a proponent of direct contracting between providers and employers, agrees that employers "don't believe insurers do a good job of managing care." Birnbaum reports that many employers believe they can do a better job in-house (as insurer TPAs) in negotiating provider fees without paying the administrative cost of a TPA or fiscal intermediary.

Physicians also are disenchanted with managed care because they have assumed more risk and reduced their fees without receiving commensurate benefits, such as greater security and increases in patient volume, consultants say. Moreover, many physicians are acutely concerned that managed care reduces physicians' professional autonomy and allows insurers and non-physician utilization reviewers to interfere with patient care and medical decisions.

Both Childs and Birnbaum believe that employers want to select the physicians and hospitals that will provide care to their employees and that provider-employer partnerships can flourish if providers can furnish convincing data on credentials, utilization, quality, and costs.

Nellie O'Gara, MPH, President of First Health Associates, Inc. in Chicago, and a member of the AMA Physicians Capital Source Steering Committee, believes the potential for direct contracting arrangements has not been tapped. O'Gara says that direct contracting arrangements may not be competitive in large cities with major employers and advanced managed care networks. However, she states that such arrangements have worked and should be able to work effectively in small to medium-sized markets where the patient population can be easily managed, but where physicians can have access to TPAs or other administrative expertise. As discussed below, some employers have developed successful niche markets for direct contracting of particular services, such as cardiovascular care.

Other AMA consultants say that their experience with direct contracting suggests that it works best between large employers whose employees comprise the majority or a significant percentage of the health care market in the area. Direct contracting markets may have the best chance for success in highly centralized areas, usually smaller to medium-sized cities, where one employer dominates, such as Caterpillar in Peoria, Il., or the Hershey Company, in Hershey, Pa.

Accordingly, direct contracting relationships comprise only a small minority of health care contracts in the current market. This is partly due to the difficulty smaller physician networks face in offering the TPA systems, such as claims processing and utilization review, that

employers want, consultants say. Because of that need to hire a TPA or employee who can provide the fiduciary relationship to the ERISA plan to show that benefits are being administered cost-effectively, single-specialty networks will be at a disadvantage in competing for direct contracts. The emergence of more sophisticated integrated delivery systems and single or multi-specialty networks with medical services management capabilities may increase direct contracting opportunities.

A number of consultants agree that as integrated systems begin taking on more TPA functions, and more contracts become capitated, more direct contracting will emerge. To succeed with direct contracting in the current market, physicians must network with enough of the physicians in the market to make it worthwhile for the employers to do business with them or consider offering specialized carve-out services, similar to the Delta cardiovascular program.

B. The Need for Development of Physician Networks

Consultants have identified the following steps employers and physicians must take to begin direct contracting:

- Employers/providers must enter a partnership focused on managing the underlying causes of medical cost increases.

- Providers must move beyond the role of supplying care to the new role as owners of integrated financing and delivery systems.

- Providers must organize to be able to compete for direct contracts. This means physicians must organize a physician group, and hospitals must have access to or partner with such a group.

- Physicians must understand that their utilization of services and admitting patterns are critical to any effort to manage care and control costs.

- Physician groups must learn how to develop and market new medical services or products.

- Physicians must develop services to meet the needs and expectations of employees, e.g., greater accessibility, weekend appointments.

- Physician groups which direct contract for employee health care needs must carefully define the range of services to be offered.

- Sophisticated services should be packaged separately, either through separate and distinct pricing mechanisms, or through sub-capitation, in which a physician-developed IPA or HMO agrees to pay capitated payments to individual physicians or groups for certain sophisticated procedures. Providers must choose carefully those specialty areas where hospitals/physicians can provide high-quality services at competitive prices.

- Physician groups must receive sound actuarial advice on how to price services, whether arrangements are made on a discounted fee-for-service or capitated basis.

- The purchase of appropriate stop-loss insurance is essential. Such insurance can be purchased through a variety of sources, not limited to large insurance company competitors. The Physicians Insurance Association of America (PIAA) companies also are beginning to offer stop-loss coverage to physicians at more affordable rates than those charged by commercial insurers.

- Physicians must develop medical information systems or contract with a practice manager or group to develop a system to track claims, utilization, outcomes, productivity and costs, and to report in timely fashion to physicians for self-monitoring and to provide report cards and other data to employers.

- Appropriate payment schemes, including co-pays and deductibles, should be negotiated.

- Physician organizations can distinguish their product/services from larger insurance organizations, such as HMOs, by developing special programs for a company and its employees.

The ability of physicians to participate effectively in direct contracting relationships will be determined in most markets by their ability to form increasingly tightly integrated networks. According to Lewin-VHI, characteristics of successful physician networks include their ability to: achieve economies of scale, access capital for information systems, expand geographically to serve the covered population, provide the full continuum of care or disease-specific bundling, compete for capitated contracts, form larger risk pools for stability, and develop ties with all specialties, especially those in primary care.

Generally, physician networks have formed along these patterns. Solo physicians begin to merge to form small group practices. Small groups merge to create larger single specialty groups. The single-specialty groups often merge with other specialties and primary care physicians to form a larger multi-specialty group which can better compete for larger group contracts.

Physicians must often struggle with a number of issues about how to form new practice arrangements. For example, single-specialty groups have some advantages over multi-specialty groups, including less complex internal issues, less problematic income distribution and greater compatibility among members. Single-specialty groups can frequently compete effectively for direct contracts related to specific specialty services. Merging two or more single specialty practices in a given market, so long as antitrust concerns are not raised, can achieve economies of scale, avoid potential violations of the Stark anti-referral laws, achieve the appropriate specialty supply to provide direct contracting services to one or more employer groups, and improve access to capital.

A single-specialty physician group's decision to merge with other specialties to form a multi-specialty network in order to compete more successfully for a broader range of direct

contracts requires careful market research. Advantages of forming a multi-specialty network include greater market power, enhanced ability to contract directly with larger employers or other purchasers, and enhanced ability to compete for capitation contracts. Specialists in a multi-specialty network have a built-in referral source, assuming they have adequate numbers of participating primary care physicians (PCPs). Again, economies of scale are achieved and access to capital is enhanced with more participants.

The disadvantages to broadening a network include losing ties to traditional referral sources, the risk that specialists' interests may be dominated by PCPs and that specialist income will be reduced, higher overhead costs, and corporate politics and personality conflicts. Any number of network models – ranging from single-specialty networks to IPAs – can be used as a basis for physicians to develop the ability to direct contract. The approach used will depend to a great extent on the local market and the leadership and vision of the physicians involved.

C. The Need for Capital

Physicians will be unable to compete for direct contracts – except in certain, unusual markets – unless they have access to capital to provide for the information systems they will need to provide cost-competitive services. Group formation requires significant capital. The amount needed will vary depending on factors including, but not limited to, the size of the physician group, specific specialty needs, existing equipment and systems, and geographic location. However, most group formations require, at a minimum, at least $5,000 per physician for accounting, legal, and consulting expenses, according to Lewin-VHI.

The AMA, recognizing the need to help physicians gain access to capital, early this year unveiled Physicians Capital Source (PCS), an initiative to assist physicians with the two most critical steps in the creation of a business: development of a solid business plan and identification of and access to potential financing sources. The linchpin of PCS is its national Advisory Committee of 61 members representing 13 states and the District of Columbia. Members include investment banking firms, venture capital firms, commercial banks, asset-based financing firms, MIS/information technology firms, health plans, consultants and legal counsel. To date, PCS is reviewing 16 projects including an ambulatory surgicenter, a multi-specialty physician network, a county medical society-sponsored physician network and management services organization (MSO), and a state medical society-sponsored HMO.

PCS serves as a vital resource for AMA member physicians forming or considering forming new ventures. In many markets, especially where managed care is not advanced, PCS will help level the playing field for physicians interested in forming direct contracting arrangements before competing insurance products dominate. Through access to capital and new networking strategies, physicians in many markets, by winning direct contracts, will be able to effectively compete with managed care plans, either by attaining a significant market share or by gaining alliances/market position that will position the physician group strategically and more favorably in navigating an often unpredictable market.

IV. Potential Liabilities of Direct Contracting

The emergence of managed care organizations (MCOs), such as HMOs, and the more recent

development of capitated plans and integrated physician/hospital health systems, such as PHOs, has led to some legal uncertainty regarding state regulation of physician organizations, PHOs or other risk-bearing health care groups that contract with self-insured plans. Two states – Kansas and Illinois – have stated in State Attorney General opinions that when PHOs or other large integrated medical systems contract with self-insured plans to provide medical services, such plans will not be subject to state insurance regulation because ERISA clearly supersedes state regulatory involvement. Other states, however, are struggling with the issue of whether a large risk-bearing organization, such as a PHO or integrated delivery system (IDS), that acts like an insurer in some respects, should also be subject to state insurance laws, including licensing and solvency requirements. While Iowa's regulations allow a PHO to become a risk-bearing entity without becoming an insurer or an HMO, other states, such as Minnesota, have developed licensing requirements for provider-based systems. California, Connecticut, Georgia, Nebraska, Oregon, Texas, Vermont, West Virginia, and Washington are reviewing such regulations, according to an Ernst & Young survey of state health regulation released in late 1994.

The case law on this issue is still developing. ERISA was established in 1974 without managed care issues in mind. ERISA litigation recently has become more complex as new managed care entities that are hybrids of insurance companies and self-insured plans emerge, and as courts continue to be split on issues such as whether HMOs or other managed care plans, including physician networks, may be held liable for the negligence of a sole physician member.

Direct contractors must be aware of possible legal liability that: 1) may result from providing utilization review or other managed care services delivered to an employer plan pursuant to a direct contract; 2) may result from acting in a fiduciary role to the extent the direct contracting physician is acting to manage or control plan costs. Generally, UR and other care denial decisions arising within the context of a contract with a self-insured ERISA plan have been held to be pre-empted by ERISA. It is unlikely that the courts would apply a different standard to a physician group contracting with a self-insured plan than would be applied to a non-physician UR group contracting with such a plan. However, physicians involved with direct contracting must be aware of the potential legal liabilities that arise with any contract, and should seek legal advice to ensure that the contract does not inappropriately shift liability risk to the physician group.

No cases involving physician liability for breach of fiduciary duty to a plan have been reported. A physician group contracting to provide services to a self-insured plan generally would not be considered to be acting in a fiduciary capacity, although such fiduciary liability could arise for a physician serving as a medical director of a self-insured plan, depending on the corporate or plan responsibilities involved.

The courts are split on whether HMOs and other managed care groups are liable under theories of agency or vicarious liability for the medical negligence of member physicians (related to medical care, not plan coverage decisions). [Dukes v. United Health Care Systems of Pennsylvania, Inc., 848 F. Supp. 39 (E.D. Pa. 1994) (ERISA pre-empts claims against an HMO for alleged malpractice of the HMO's physicians). But see Kearney v. U.S. Healthcare, 1994 U.S. Dist. LEXIS 10821 (E.D. Pa. August 3, 1994) (ERISA does not pre-empt alleged negligence of HMO under ostensible agency theory).]

State policies on whether medical service plans constitute the business of insurance vary and have not been addressed extensively by the courts. Some state court decisions have concluded that dental or vision plans are not insurers because they provide services rather than indemnification. [Michigan Podiatric Medical Association v. National Foot Care Program, Inc., 175 Mich. App. 723, 438 N.W. 2d 349 (1989).]

The courts have consistently held that ERISA pre-empts the regulation of TPAs who provide services to self-insured plans. TPAs working for self-insured plans do not constitute the business of insurance. [NGS American, Inc. v. Barnes, 805 F. Supp. 462 (W.D. Tex. 1992), aff'd 998 F.2d 296 (5th Cir. 1993).] While legal uncertainties remain, the prevailing legal climate appears to be generally favorable to physician organizations which directly contract with self-insured employers.

V. Examples of Direct Contracting in the Current Market

A) John Deere Health Care – Direct Contracts Leading to HMOs

John Deere Health Care provides managed care programs and health services, both directly and through two HMO subsidiaries, to Deere employees as well as to the employees of more than 700 different employer groups. Deere Health Care covers more than 300,000 people in Illinois, Iowa, Tennessee, Virginia, and Wisconsin.

John Deere Health Care is a wholly owned subsidiary of Deere & Co., a manufacturer of tractors, agricultural equipment, and lawn and grounds care equipment, headquartered in Moline, Il. Like many very large employers, Deere & Co. became self-insured in 1971, after its health care expenditures for employees, retirees, and their dependents reached $20 million. Deere began studying various forms of direct contracting with physicians, including using HMOs, and in 1980, helped to form the first HMO in the Quad Cities area of Illinois and Iowa.

Deere's positive experience with direct contracting prompted the company in 1985 to form two HMOs to provide care to Deere employees at various sites, as well as to other employers. For Deere, the HMO format was the natural evolution of direct contracting because it involved the same physician-employer partnership, but in a more tightly integrated model, according to Claudia Greenleaf, employee benefit manager. Deere developed two HMO products – Heritage National Plan, an IPA model HMO, and John Deere Family Health Plan, a staff model HMO.

The Heritage plan is comprised of physician IPA members who directly contract to provide care for Deere through a company contract services department. Operationally, these physician contracts are handled at 18 different locations in a five-state region. The loose contracting relationship works, Greenleaf said, because the company has "good day-to-day relationships with physicians in the area." Deere's direct contracting approach is successful because it can command market share and patient volume in a community with a "target size" such as the Quad Cities, which has a population of approximately 300,000. Company officials acknowledge that their plan "would not be competitive in Chicago or Los Angeles."

In contrast, the John Deere Family Health Plan (JDFH) HMO actually employs physicians to work for the HMO, but also sub-contracts directly with certain specialty panels. JDFH operates in Des Moines, Waterloo-Cedar Falls, Iowa, and in the Quad Cities. HMO services are directed by primary care physicians. Both Heritage and JDFH HMOs have an alliance with the Mayo Clinic for the development of Mayo disease management strategies.

Both the IPA HMO and the staff model HMO utilize sophisticated data collection and information systems that monitor patient outcomes, quality and efficiency of care, as well as provide for case management, utilization review, and pre-procedure review. Based on this information, the plans provide education to both physicians and enrollees on how to best utilize health care resources.

The decision to move an HMO format was prompted in part by administrative ease and greater accessibility to shared information and information systems in that structure, Greenleaf said. "It's very difficult for a physician in his own office to have the systems to track everything that we want tracked."

B) Caterpillar – Direct Contracting with Individual Physicians in a Small Community

Caterpillar, the large industrial equipment manufacturer based in Peoria, Il., had an "informal" contracting arrangement with local physicians for years until 1991 when the company approached community physicians and offered to set a baseline payment schedule. Dick Wright, director of employee benefits at Caterpillar, said that while the fee schedule is discounted, "the physician will usually accept it because Caterpillar patients are 20% of his volume and we pay on time."

In order to cut health care costs for its 35,000 Illinois employees, 20,000 of whom live in the Peoria area, Caterpillar undertook several direct contracting arrangements. The employer took out a request for proposal seeking an exclusive contract with an area hospital that would agree to a 20% discount, while also guaranteeing quality. The contract went to St. Francis Hospital, the largest hospital and the only teaching institution in Peoria. Since then, employee hospitalization costs have decreased substantially.

The hospital contract led to changes in physician practices. According to Wright, when St. Francis began working on a DRG basis (minus the 20% discount), the hospital began to examine its procedures to improve cost-efficiency. The hospital began working with local cardiologists to standardize cardiac testing, including requiring all physicians and hospital employees to use the same type of catheter for certain procedures. The change saved Caterpillar thousands of dollars.

The perception that medical practices can be better managed and standardized even in a community of 125,000 people, such as Peoria, underscores the patient care agreements between Caterpillar and the more than 1,000 physicians with whom it contracts, even though there is no structured managed care plan or HMO in the community. Caterpillar's considerable data, based on claims experience and utilization patterns, and its expertise at collective bargaining with the local union make it a tough negotiator in determining physician fee schedules.

Some physicians caution that, as the largest employer in Peoria, Caterpillar has too much market clout in determining and negotiating fees. American Medical News, in a December 13, 1994 article, reported that Caterpillar was one of several large employers nationwide who had developed what they determined to be appropriate fee schedules, and advised employees not to pay any balance due over the insured amount. The employers also advised employees that if the physician sued to collect the balance due, the employer would defend the patient and pay whatever judgment and fees were rendered. Physicians in the area say that knowing Caterpillar or other employers will indemnify and legally represent patients they say have been overcharged intimidates physicians into accepting lower reimbursement, eventually driving down average physician fees in a market area.

Some physicians say that fees in Peoria are significantly lower than in surrounding communities, due, in part, to Caterpillar's policies. Another problem, these physicians says, is that physicians who have legally wrangled with Caterpillar over fees have been excluded from its direct contracting network, which includes 95% of the area physicians. Caterpillar denies that physicians are excluded for these reasons and maintains that it wants to work with any competent physician its employees select.

Other physicians in the community say that direct contracting with Caterpillar has allowed them to preserve fee-for-service medicine and their clinical autonomy. These physicians say they are busy, have plenty of patients, and believe their contracts are fair and straightforward, compared to those offered by some insurers and managed care plans. (Caterpillar prides itself on the fact that the vast majority of its physician contracts are no more than one page long.)

Caterpillar's contracts with physicians are priced based on the CPT specialty schedule. Caterpillar physicians almost never unbundle fees, unless the contract so provides. Each year, the contract is subject to increase based on the general, not medical, Consumer Price Index (CPI), which has averaged about 3% for the last few years. This year, Caterpillar also added an additional 1% to the CPI adjustment to offset increases in professional liability premiums.

Caterpillar handles all health care claims processing and contracting in-house. The company employs 40 claims adjustors, and 20 technical experts. It also employs several board-certified internists and a board-certified surgeon who determines reimbursement rates based on CPT codes and claims history, along with CPI. While local physicians handle most cases, Caterpillar provides for outside referral for tough cases that stymie local physicians or for "significant" health problems such as organ transplants. Caterpillar has referral arrangements with the Mayo Clinic, as well as a number of tertiary care centers in Chicago, including Loyola Medical Center in Maywood. Referrals must be approved by Caterpillar physician employees, who are well thought of by their peers in the community, Wright said, and who approve "80% of the referrals sought."

Caterpillar has never contracted with a third-party administrator to facilitate direct contracting because the employer believes it can perform the task more cost-effectively. In Caterpillar offices in Denver, Nashville, and York, Pa., Caterpillar contracts with PPOs because the communities are larger. Unlike Peoria, Caterpillar staff in those cities do not have the same type of long-established relationships and are unable to know the reputation of the individual physicians and group practices personally, Wright said.

In contrast, Wright believes that knowing the Peoria physicians personally provides for a great exchange of information, good quality care, and lowered costs. For Caterpillar's $275 million in total health care claims paid last year, Wright said that the direct contracting approach carried employer administrative costs of about 3% of total claims. The best bids received from TPAs, including insurance company TPAs, are at about 5%. Wright believes that direct contracting saves Caterpillar "several millions of dollars a year."

Wright also believes that HMOs and other managed care approaches the company has tried "didn't do the job." He also found that "insurance companies are too dictatorial and do not deal adequately with unbundling." In contrast, Caterpillar learned that direct contracting helps the employer partner with the physician. Physicians, he said, "clearly want help from us in assessing the data on utilization." Currently Caterpillar is just beginning to track physician utilization review patterns on certain procedures. The goal in analyzing the data is to work with physicians to self-correct. "It would be a last resort to invite a physician to leave the program. In a community like this, that's not what we want to do."

Recently, Caterpillar purchased software called "Patterns of Care" from HPR in Boston. The software is supposed to examine various patterns of medical practice and point out aberrant situations. The goal is to use the information for educational purposes. Caterpillar wants the physicians it contracts with to have access to the information on practice guidelines to avoid unnecessary procedures. Wright stressed that "these guidelines must be used in an advisory, not a dictatorial, way. The doctor may see a patient and know other things are wrong that would prevent complete reliance on the guidelines."

C) <u>The Delta Airlines Preferred Cardiac Provider Group</u>

In 1992, a desire to cut employee health costs related to expensive cardiovascular procedures and improve related mortality and morbidity rates led Delta Airlines to send out a nationwide Request for Information (RFI) among cardiac care centers of excellence. The goal was to amass extensive data on the various centers' quality records, mortality and morbidity, utilization experience, outcomes and costs, including the fee schedule for each procedure. The goal was to directly contract nationally with a network of major cardiac centers that provided the best quality and cost-effective care. And Delta's goals in developing its "Complex Care" network were met "in every respect," according to Chris Bisgard, MD, Director of Health Services for Delta, and a specialist in Preventative Medicine.

Information obtained from the RFIs was used to develop Request for Proposals to provide the preferred network of excellent cardiac care that Delta sought. By 1993, Delta had formed its preferred network based on geographic location, quality, and cost to include Massachusetts General Hospital, Boston, and St. Joseph's Hospital, Atlanta, in the East, Cleveland Clinic, and Texas Heart Institute in Houston in the Midwest, and Good Samaritan Medical Center, Los Angeles, and Latter Day Saints Medical Center, Salt Lake City, in the West. Physician groups were selected to participate based on medical staff relationships and through other referrals. The physician groups, like the hospitals, went through the same RFI and response to proposal process. The payoff for the physicians and hospitals was the patient volume promised by direct contracting with one of the nation's largest employers.

Complex Care provided a TPA for several cardiac groups that did not have the service the network would need. Other groups had existing TPA arrangements. While it was not clear what percentage of TPA costs were involved, the result was clearly win-win for both sides, according to Dr. Bisgard and Harold Karpman, MD, a cardiologist and clinical professor of medicine at University of California at Los Angeles. Delta saved a "tremendous amount of money," without a single patient death and "minuscule" morbidity. According to Dr. Bisgard, Delta's experience reinforced for the employer that it paid to have a very highly skilled team involved in cardiovascular procedures. While physicians were crucial, the hospital team, including nurses, rehabilitation experts, and other hospital staff, were perceived as critical to the successful patient outcomes.

The success of the "Complex Care" program led Delta to conclude that direct contracting in this setting was an excellent idea. Unfortunately, the program's success also led to a takeover bid from Cigna, one of the nation's largest insurers. The result is that Delta is now in the transition of folding its existing direct contract relationships into a national Cigna managed care network.

Delta chose to use Cigna for administrative ease because Cigna had won the managed care contract to administer and provide Delta's overall health benefits program. Delta concluded that Cigna's record of utilization, mortality, and morbidity, and cost, would complement Delta's first venture into managing care through the "Complex Care" cardiac network and allow the cardiac network to broaden its scope, while maintaining its record of excellence through enhanced abilities to track and process information.

The lesson of "Complex Care" for Delta is that direct contracting "will work for physicians, especially if they learn capitation, learn how to streamline their practices, and learn how to integrate and form networks with other physicians."

D) Buyers Healthcare Cooperative

Buyers Healthcare Cooperative, operated by Edwin Childs, in Nashville, Tn., is a buyer broker of health care services that links health care services to smaller employers and alliances of smaller employers in rural areas with low managed care penetration. BHC works by organizing smaller employers, such as local factories, into regional groups. Childs, as the agent for the groups, approaches regional hospitals and negotiates fixed, discounted prices for hospital care. The arrangement gives smaller, self-insured employers more clout and provides additional patient volume for hospitals willing to negotiate. BHC has developed contracts, in some cases, at several sites, in states that include Tennessee, Indiana, Texas, Arkansas, and Pennsylvania. BHC's fees are based on program savings and serving as a TPA, in some cases, for smaller firms. Childs is currently in the process of developing a physician office management and community health network information system, which will be used to promote direct contracting opportunities for physician groups in this market.

E) Medical Society and Media Reports of Developing Direct Contract Arrangements

Several medical associations are forming physician networks to explore opportunities for

direct contracting. Mississippi State Medical Association recently incorporated a subsidiary, for-profit company called Mississippi Physicians Care Network. The PPO product is open to all MSMA members who meet credentialing requirements. The PPO's primary target is self-insured employers. The PPO has two payment mechanisms – one based on fee for service and per diem rates, the other involving a target budget plan, in which the PPO assumes risk for any amounts up to the amount of provider withholds used to cover shortfalls. The contract employer assumes the risk for any amounts exceeding the target budget, plus the withhold. If costs come in below the target budget, both the employer and PPO share the savings. Currently, 800 primary care and 700 specialist physicians have signed up as panel members. No contracts have been developed at this time.

Michigan State Medical Association is also exploring direct contracting possibilities. The society is working with a multi-specialty physician network in Jackson and Dearborn, Mi., including setting up meetings between the Jackson physician group and a local business coalition. MSMA is also negotiating with PhyCor, a physician management company that has approached the networks about serving as a TPA to help the group develop capitation rates and facilitate direct contracting arrangements. PhyCor's initial offer of fee of 6%, based on amounts of full-risk premiums paid, is being negotiated.

The South Carolina Medical Association has formed Physicians Care Network, again targeting self-funded employers. The plan has 5,500 covered lives, and includes 2,800 physicians and 38 hospitals. The network fee schedule, established for each CPT code, is based on the 80th percentile of the surveyed charges submitted by all the practicing physicians. The network establishes a pre-calculated target budget for each subscriber, based on the subscriber's past history. Below target savings are shared 50-50. Providers withhold 15%, a portion of which goes to network operation fees.

Recent media reports also demonstrate that interest in direct contracting between physicians and employers is on the rise. The New York Times reported on March 7, 1995 that doctors are "fighting back" against the growing clout of insurance companies as a "small, but growing number of physicians are leapfrogging the middleman by offering to sell their services directly to employers."

Examples included 200 physicians who formed the El Paso Community Health Plan to treat job-related injuries for a Levi Strauss plant in El Paso and 3,500 New Jersey physicians who recently contributed $5,000 each to organize their own HMO.
The Times concluded that "even doctors who are not directly contracting with employers now recognize that they must form groups to survive."

Deans Roundtable

AAMC ASSOCIATION OF AMERICAN MEDICAL COLLEGES
2450 N STREET, NW, WASHINGTON, DC 20037
PHONE 202-828-0400 FAX 202-828-1125

Educational Partnerships in a Managed Care Environment

Monday, March 4, 1996
10:00 a.m.-3:00 p.m.
Sheraton Gateway Suites
6501 North Manheim Road (near O'Hare Airport)
Chicago, Illinois

HOSTS

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Chairman and CEO
Allina Health System

Advance registration is required. Please return the registration form to the AAMC by Friday, February 23. Hotel reservations should be made by Monday, February 19, to insure room availability. See Hotel Site, Travel & Registration Information sheet for details.

DEANS ROUNDTABLE - MARCH 4, 1996

EDUCATIONAL PARTNERSHIPS IN A MANAGED CARE ENVIRONMENT

There are a number of compelling reasons why medical schools need to be more vigorous in their efforts to shift the clinical education experiences provided to medical students and resident physicians from traditional teaching hospital inpatient settings to a variety of community-based patient care settings, primarily ambulatory practice sites. It is generally understood that the impact of changes in the health care delivery system on the number and case-mix intensity of the patient populations hospitilized in major teaching hospitals is paramount in creating this imperative.

There is, perhaps, less appreciation for the fact that forces at play in the market will make it more difficult for medical schools to place students and residents in appropriate community-based, ambulatory sites. The changes evolving in the delivery system will increasingly demand that ambulatory care services be provided more efficiently. This will present challenges to those designing ambulatory-based educational experiences for students and residents. At the same time, the control over management decision-making in practice settings - such as whether or not students or residents will be allowed to spend time at the practice setting, and if so under what circumstances - is shifting from individual practitioners to organizations as more and more practices are incorporated into physician practice management organizations, physician-hospital organizations, etc. Accordingly, medical school deans interested in creating educational parterships that would provide access to ambulatory practice sites for students and residents will face a different set of issues than those faced in the past.

The purpose of this roundtable is to provide an opportunity for medical school deans to gain the perspectives of a group of executives who work in diverse managed care entitites about issues which deans are likely to encounter in their efforts to form educational partnerships in a managed care environment. To be clear, the roundtable will not address as primary topics the kinds of curriculum content changes that schools should make in order to better prepare students for practice in a managed care setting, or efforts to define a role for the medical school faculty practice plan in the delivery of services in an increasingly competitive market. The roundtable will allow deans to gain an better understanding of the dynamics of the current market place and how these dynamics are likely to affect the availability of clinical education experiences for students and residents.

The organizations (cities where they are located) which will be represented at the roundtable are the George Washington University Health Plan (District of Columbia), the Henry Ford Health System (Detroit), Group Health Cooperative of Puget Sound (Seattle), Sierra Health Services (Las Vegas), and Allina Health System (Twin Cities). The organizations are quite diverse in their structure and management, and the cities where they are located are at different stages with regard to the penetration of managed care in the market.

HOTEL SITE, TRAVEL & REGISTRATION INFORMATION

AAMC Deans Roundtable:
Educational Partnerships in a Managed Care Environment
March 4, 1996

Sheraton Gateway Suites
6501 North Manheim Road
Chicago, IL 60018
TEL: (708) 699-6300, FAX: (708) 699-0391

Getting to the Hotel

The hotel is approximately one and a half miles from O'Hare International Airport at the corner of Manheim Road and Higgins Road. The Sheraton provides complimentary transportation to and from O'Hare International Airport. Please use the courtesy phones located near the baggage carousel to request transportation from the airport. Downtown Chicago is just 18 miles away.

Airline Discount Information

United is offering special discounted rates for this meeting. Discounts include a 5% savings off any published promotional roundtrip fare and a 10% savings off full coach class fare. To receive this discount, you or **your travel agent** must use the toll free number 1-800-521-4041 (open seven days a week, from 8:00am to 9:00pm EST) and refer to the **AAMC 563WW** when making your reservations. These discounts are valid providing all rules and restrictions are met.

Hotel Reservations and Room Rates

Hotel rooms have been reserved for our group at the rate of **$109.00** per night based on single occupancy. The rate, which is subject to a state and city occupancy tax currently at 12%, is available 2 days before and after the meeting date.

To make your reservations, please call the hotel's reservation desk at 1-800-548-4193. Please be sure to identify yourself with the AAMC Meeting. Reservations must be made PRIOR to February 19th. Rooms held for our group will be released on this date . Any reservation request received after February 19th will be confirmed on a space available basis only at the group rate. To guarantee your room, the hotel requires a deposit in the amount of one night's room and tax. Otherwise, reservations will not be held after 4:00pm. The deposit will be applied to any guaranteed no-shows. Check-in time at the Sheraton is 3:00pm. The hotel will make every effort to accommodate early arrivals. Check-out time is 12:00 noon. You may arrange for the Bell Captain to store your luggage if you have an early arrival or a late departure.

Registration Procedures **Registration Fee: $60.00**

Advance registration is required. Please return the registration form to AAMC by Friday, February 23. The registration fee covers all meeting materials, coffee breaks and lunch. A check, institutional purchase order, or credit card information should accompany your registration form. Credit card transactions (Mastercard & Visa only) are subject to approval. **Checks should be made payable to the AAMC.**

Cancellation Policy

In order to receive a full refund, notice of cancellation must be received by our offices **in writing** (FAX# 202-828-1125) at least seven working days in advance of the meeting. Withdrawals after that time will result in the forfeiture of the entire fee. Please be aware that the cancellation of any hotel room reservation is your responsibility. If you have any questions, please contact Irene Nicolaidis at (202) 828-0479.

PAYMENT MUST ACCOMPANY THIS REGISTRATION FORM

AAMC DEANS Roundtable: ***Educational Partnerships in a Managed Care Environment***
March 4, 1996, Sheraton Gateway Suites, Chicago, IL

Name: Dr() Mr() Mrs() Ms()_____ Degree: _____

Name As You Wish It to Appear on Badge: _____

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Do you or anyone attending with you require any special accommodations or services as mandated by the Americans with Disabilities Act? If yes, please describe: _____

REGISTRATION FEE: $60.00

Please see attached meeting facts sheet for details about the registration fee and cancellation policy. Please include a check, purchase order or credit card information with this form. Credit card transactions are subject to approval. Checks should be made payable to **AAMC**.

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Deans' Roundtable, Educational Partnerships in a Managed Care Environment

Sheraton Gateway Suites
Chicago, IL

March 4, 1996

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Report date: 02/29/96

Academic Medicine, May, 1995, P. 381

FROM THE PRESIDENT

Educational Mandates from Managed Care

Much has been written about the major transformations facing American medicine, particularly as a greater proportion of our population becomes enrolled in managed care organizations. Like it or not, most Americans seem destined to receive their care through delivery systems more constrained in their use of resources, more limited in the ranges of choices available to individuals, and more tied to guidelines and standards of practice. Less has been written about the transformations in medical education that must occur to prepare our students for the new practice environment that is emerging. Of particular concern to me, and I would hope to the Association's members, is the heightened need to ensure proper professional grounding and ethical development for our nation's future physicians. We surely want every physician–patient encounter in the future, as in the past, to be ruled by an ethic that places the patient's interest above all else.

Managed care, while certainly not requiring a transformation of that timeless ethic, does challenge it in profound and unprecedented ways. Our traditional view of the physician's role in the management of patients placed great value on doing virtually everything of potential benefit. "Leave no stone unturned." "If it might help, do it." Conspiring to foster this view was the fee-for-service method of physician payment that, at best, placed no financial barrier to utilizing resources and, at worst, rewarded profligate and unnecessary services. Now comes managed care, with its heavy emphasis on cost effectiveness and on doing nothing that is not of proven value. "A penny saved is a penny earned." "If it might *not* help *don't* do it." Conspiring to foster this view of patient management is the capitation method of physician payment that, at best, teaches discipline and parsimony and, at worst, rewards withholding needed services.

The American Medical Association has performed a valuable service for our profession with the publication of a recent report from its Council of Ethical and Judicial Affairs.[1] The report and an accompanying commentary[2] note that the conflicting loyalties faced by physicians practicing in managed care settings are not unique to those settings, given that any system of physician payment includes an element of financial self-interest. Whatever the setting, the AMA report emphasizes that the conflicts among patients that arise from allocation decisions and the conflicts between patient and physician that accompany compensation systems based on resource utilization must be resolved in ways that scrupulously maintain the trust on which the patient–physician relationship is based.

The report also warns of the especially difficult ethical problems associated with "bedside rationing." Unavoidably, such decisions are charged with conflicts between individual patient needs and the needs of society, and conflicts between the physician's role as patient advocate and the physician's responsibility to use resources wisely. The report states that "allocation decisions should be determined not by individual physicians at the bedside but according to guidelines established at a higher policymaking level." Just as importantly, the report mandates that "physicians should contribute their expertise in the development of the guidelines and should advocate for the consideration of differences among patients."

For academic medicine to meet the social obligations posed by the advent of a managed-care–dominated delivery system, several educational imperatives must be addressed. First, medical students must be educated explicitly in how to manage clinical resources parsimoniously and in how to understand and use the results of health services research.

Second, students must be motivated and equipped to contribute to the development of patient care guidelines and to assume leadership and policymaking roles in managed care organizations so that the patient-oriented values of the medical profession are not overrun by the bottom-line–oriented values of commercialism.

Third, students must acquire a better grasp than we currently require of them in clinical epidemiology, in environmental and occupational health, in prevention strategies, and in how to communicate effectively with patients, so that managed care organizations can achieve their promised goal of improving the health of a defined population.

Fourth, students must learn how to make evidence-based decisions, rooted in outcomes research, framed by cost–benefit analysis, and catalyzed by information science.

Fifth, tomorrow's physicians must be better prepared to function as a part of a health care team, working in harmony both with other physicians and with other health professionals to deliver the highest quality care at the lowest possible cost.

And, finally, students must be braced as never before with a firm foundation in medical professionalism. The ramparts surrounding patients' interests will be under fearsome attack, and physicians will be challenged as never before to ward off powerful temptations of self-interest.

– Jordan J. Cohen, MD

Dr. Cohen is president, Association of American Medical Colleges, Washington, D.C.

References

1. Council on Ethical and Judicial Affairs, AMA. Ethical Issues in Managed Care. JAMA 273(1995):330-335.
2. Clancy, C.M., and Brody, H. Managed Care: Jekyll or Hyde? JAMA 273(1995):338-339.

COUNCIL ON GRADUATE MEDICAL EDUCATION

Sixth Report

Managed Health Care:

Implications for the Physician Workforce and Medical Education

SEPTEMBER 1995

COUNCIL ON GRADUATE MEDICAL EDUCATION

Sixth Report

Managed Health Care:

Implications for the Physician Workforce and Medical Education

September 1995

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
Public Health Service
Health Resources and Services Administration

The views expressed in this document are solely those of the Council on Graduate Medical Education and do not necessarily represent the views of the Health Resources and Services Administration nor the U.S. Government.

The Council on Graduate Medical Education (COGME)

COGME was authorized by Congress in 1986 to provide an ongoing assessment of physician workforce trends and to recommend appropriate Federal and private sector efforts to address identified needs. The legislation calls for COGME to serve in an advisory capacity to the Secretary of the Department of Health and Human Services (DHHS), the Senate Committees on Labor and Human Resources, and the House of Representatives Committee on Commerce. By statute, the Council terminates on September 30, 1995.

The legislation specifies that the Council is to comprise 17 members. Appointed individuals are to include representatives of practicing primary care physicians, national and specialty physician organizations, international medical graduates, medical student and house staff associations, schools of medicine and osteopathy, public and private teaching hospitals, health insurers, business, and labor. Federal representation includes the Assistant Secretary for Health, DHHS; the Administrator of the Health Care Financing Administration, DHHS; and the Chief Medical Director of the Veterans Administration.

Charge to the Council

Although called the Council on Graduate Medical Education, the charge to COGME is much broader. Title VII of the Public Health Service Act in Section 799(H), as amended by Public Law 99-272, as amended by Title III of the Health Professions Extension Amendments of 1992, requires that COGME provides advice and makes recommendations to the Secretary and Congress on the following:

1. The supply and distribution of physicians in the United States.
2. Current and future shortages or excesses of physicians in medical and surgical specialties and subspecialties.
3. Issues relating to foreign medical school graduates.
4. Appropriate Federal policies with respect to the matters specified in (1), (2), and (3) above, including policies concerning changes in the financing of undergraduate and graduate medical education programs and changes in the types of medical education training in graduate medical education programs.
5. Appropriate efforts to be carried out by hospitals, schools of medicine, schools of osteopathy, and accrediting bodies with respect to the matters specified in (1), (2), and (3) above, including efforts for changes in undergraduate and graduate education programs.
6. Deficiencies in, and needs for improvements in, existing data bases concerning the supply and distribution of, and postgraduate training programs for, physicians in the United States and steps that should be taken to eliminate those deficiencies. The Council is to encourage entities providing graduate medical to conduct activities to voluntarily achieve the recommendations of this Council under (5) above.

COGME Reports

Since its establishment, COGME has submitted or is in the process of completing the following reports to the DHHS Secretary and Congress:

- First Report of the Council, Volume I and Volume II (1988)
- Second Report: The Financial Status of Teaching Hospitals and the Underrepresentation of Minorities in Medicine (1990)
- Scholar in Residence Report: Reform in Medical Education and Medical Education in the Ambulatory Setting (1991)
- Third Report: Improving Access to Health Care Through Physician Workforce Reform: Directions for the 21st Century (1992)
- Fourth Report: Recommendations to Improve Access to Health Care Through Physician Workforce Reform (1994)
- Fifth Report: Women and Medicine (1995)
- Sixth Report: Managed Health Care: Implications for the Physician Workforce and Medical Education (1995)
- Seventh Report: Physician Workforce Funding Recommendations for Department of Health and Human Services' Programs (1995)
- Eighth Report: Patient Care Supply and Requirements: Testing COGME Recommendations (late 1995)

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Other Work Groups and Staff

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REPRINTS, REPORTS AND BACKGROUND PAPERS

Reprints of the article and copies of the full report may be obtained by writing to Dr. Marc Rivo, COGME, 5600 Fishers Lane, Room 9A-27, Rockville MD 20857 (301-443-8890 fax).

The four background papers which contributed to this report may be obtained through order from the National Technical Information Service (phone 703-487-4650). They are:

(1) *Assessing the Impact of Managed Care on the Physician Workforce*, Jonathan Weiner, Dr.P.H. (ordering number PB94-142288)

(2) *The Impact of Managed Care on the Medical Education Environment*, Gordon Moore, M.D. (ordering number PB94-142296)

(3) *COGME 1995 Physician Workforce Funding Recommendations for Department of Health and Human Services' Programs*, COGME's Seventh Report to Congress and the HHS Secretary.

(4) *Patient Care Supply and Requirements: Testing COGME Recommendations*, COGME's Eighth Report to Congress and the HHS Secretary.

I. Executive Summary

FINDINGS

Finding # 1: Managed care has been growing rapidly in both the private and public sectors, and in most geographic areas, and this growth is likely to continue or accelerate in the future.

Managed care reflects a broad set of fundamental changes taking place in the health care system, characterized in both the delivery and financing of health care. Each of the various types of managed care has been growing in recent years, with health maintenance organizations (HMOs) and preferred-provider organizations (PPOs) having grown 3 to 4-fold in the past decade, and more recently with point-of-service (POS) and other hybrid plans rapidly emerging. Almost two-thirds of employees in large firms are now in HMOs, PPOs, or POS plans, and the number of federal employees and Medicaid and Medicare recipients enrolled in managed care programs has more than doubled over the past decade (increasing to approximately 39 percent, 12 percent, and 7 percent of their respective populations).

Despite the concern of many physicians about managed care, over three-fourths have at least one managed care contract, and almost one-half are involved with at least one HMO. While managed care has increased in most areas, wide geographic variation remains, ranging from 0 to 35 percent of the population enrolled among states, and from less than 10 percent to greater than 50 percent among metropolitan areas. Continued pressures from government and business to increase the quality and cost effectiveness of medical care will reinforce this trend of managed care growth, which appears to be irreversible, and which many experts predict will accelerate.

Finding # 2: The growth in managed care will magnify the physician workforce concerns expressed by COGME in prior reports, that there is a large and growing oversupply of physicians overall and especially of specialists and subspecialists, and that there is a modest need for more generalist physicians.

Health maintenance organizations have long embraced the concept of primary care, and have shown a strong preference for generalist physicians. In addition, HMOs are moving in the direction of increasing the scope of practice of generalist physicians, and decreasing utilization of and referrals to specialists and subspecialists.

The continued growth in managed health care may magnify the physician surplus and generalist:specialist imbalance identified in the 1992 COGME Third Report. Given the current rate of producing physicians (25,000 residents are entering the first year of training each year, equivalent to the number of 1993 US medical students graduates plus 40 percent), and of specialty output (30 percent generalists and 70 percent specialists), the patient care specialist supply is projected to increase from 140 to 150 specialists per 100,000 between the year 2000 to 2010. This compares with COGME's estimated staffing requirements of 85 to 105 specialists per 100,000 population in a managed care-dominated environment. Compared with the midpoint of the requirements range, this would translate into a projected surplus of 125,000 specialists in the year 2000 and 170,000 in the year 2010.

During the same period, the patient care generalist supply is projected to remain stable at 63 to 67 generalists per 100,000 population, compared with COGME's estimated staffing requirements of 60 to 80 generalists per 100,000. Compared with the midpoint of the requirements range, this would represent a modest shortage of 20,000 generalists in the year 2000 declining to 8,000 (or near balance) in 2010. The potential for physician underemployment or unemployment as we enter the 21st century is suggested by this and other workforce analyses, whether they assume that managed care or fee-for-service arrangements will predominate.

Finding # 3: Changes in the health care environment that have led to the growth in managed care will also have major effects on the allopathic and osteopathic medical education system and their teaching institutions; this will likely result in decreased financial support for medical education at both the undergraduate and graduate levels, which could affect the quality of these endeavors.

The growth in managed health care will influence educational institutions to make major changes in the way they deliver and finance patient care. Teaching institutions will be required to compete with other health plans and medical groups for managed care contracts. However, many teaching institutions may be hindered by their traditionally higher operating costs, predominance of specialists and orientation towards specialty care, lack of primary care infrastructure, and emphasis on teaching and research, as well as their more complicated patient mix and larger proportion of the uninsured and underinsured. The higher costs tra-

ditionally attributed to the learning needs of trainees, such as increased use of diagnostic tests and procedures and longer lengths of stay, can no longer be accepted as part of normal operating expenses in the increasingly competitive health care marketplace.

The net effect of increased competition may well be a decrease in clinical income for many teaching institutions, which has traditionally supported their medical educational components. Increased competition may also result in a decrease in the availability of other important educational resources, such as training sites, teachers, and patients. These necessary adjustments may be considered contrary to the traditional "culture" of academic medicine, which placed a high value on departmental autonomy and a decentralized decision-making structure. Teaching institutions that cannot adjust may see the quality of education at the undergraduate as well as the graduate level affected and their own survival threatened.

Finding # 4: The growth of managed care will magnify the deficiencies of the current educational system, yet will also provide new and essential educational opportunities to improve the preparation of physicians for their future roles.

In response to the needs of the changing health care environment, educational programs will have to produce a physician with a different set of skills and new areas of knowledge. The current medical educational system has been successful in training physicians for a health care system based on fee-for-service, specialty, and acute hospital care. However, changes in the content of the educational program and the sites used for clinical training will be needed to prepare physicians for effective practice in a managed care environment, with an emphasis on cost-effective, ambulatory, and primary care. Although the number of relationships are growing, relatively few educational linkages exist between academic medical centers and managed care organizations, especially with newer independent practice association (IPA) types of managed care.

Finding # 5: There are currently many barriers and few incentives by which health care and teaching institutions can address these problems regarding the physician workforce and medical education.

Currently there are few incentives for medical schools, residency programs, teaching hospitals, managed care organizations, or state or federal government to work either individually or collaboratively to address the nation's physician workforce or medical education priorities. Competition for patient care between teaching hospitals and managed care organizations, concern for who shares in the cost of medical education and ambulatory training, and conflicts between patient satisfaction and trainee needs have all created barriers against which health care delivery systems and teaching institutions must attempt to address national physician workforce and medical education goals.

Key federal policies, particularly Medicare graduate medical education (GME) financing, have produced significant disincentives toward training more generalists and fewer specialists, move training to ambulatory, community-based and managed care settings, and prepare new physicians in the requisite competencies for managed care practice. These disincentives in Medicare GME should be corrected to better prepare physicians for effective managed-care practice.

RECOMMENDATIONS:

With the rapid changes taking place in the health care environment, medical schools, residency programs, teaching hospitals and managed care organizations are encouraged to collaborate and cooperate to produce physicians with in the requisite numbers, specialty mix and competencies to meet patient needs. In addition, public funds for medical education through Medicare and the Public Health Service must be targeted prudently to provide the right incentives in the medical education marketplace.

Recommendations are the following:

Medical Schools, Residency Programs, and Teaching Facilities:

1. As medical schools, residency programs and teaching facilities restructure in order to be more competitive in patient care and at the same time preserve their academic mission, they will also need to reassess their roles and responsibilities regarding the physician workforce and medical education.
2. Medical schools, residency programs and teaching facilities should share in the responsibility to train the number and types of physicians appropriate to the nation's needs.
3. Medical schools, residency programs and teaching facilities need to evaluate their institutions and identify deficiencies that are barriers to achieving a more balanced physician workforce, and to train physicians for their future roles. These institutions should:

   a. assure that the process selects applicants who are motivated, have the qualities and abilities, and who can be educated and trained to become the physician workforce which the nation needs;

   b. assure that the curriculum educates students for their future role, including the "new basic sciences" of population-based medicine, epidemiology, and decision analysis; and

c. assure that the clinical curriculum provides an adequate education in ambulatory and managed care settings, preventive care, team care, and cost-effective patient care.

4. The size, composition and competencies of the full-time faculty at medical schools and residency programs must be reviewed in order to assure that they are appropriate to train physicians for their future roles.

5. Residency programs need to train residents in managed care environments, to review and revise existing residency curricula to ensure that the knowledge, skills and attitudes necessary for future physicians are included, and to adequately prepare both their primary care and specialty graduates for the scope of practice, coordinated relationships, and referral patterns found in managed care organizations.

6. Additional training programs should be developed to meet the needs of the future health care delivery system, e.g. programs for retraining specialist physicians as generalist physicians; and fellowship training to develop physician leadership in managed care environments.

7. Medical schools, residency programs and teaching hospitals need to identify and review their teaching costs, and make their educational programs more efficient.

8. Evaluation at the medical school, residency and continuing medical education levels should incorporate the knowledge, skills and attitudes that will be needed by future physicians, and should be reviewed as medical education and training becomes more decentralized.

9. External certifying and accrediting organizations (e.g. the National Board of Medical Examiners, the National Board of Osteopathic Medical Examiners, the Accreditation Council for Graduate Medical Education, the American Osteopathic Association-Bureau of Professional Education, the Liaison Committee on Medical Education, the Residency Review Committees) need to address the new elements in health care delivery and reassess their structure, policies, and procedures in light of the findings in this report.

10. Medical schools and residency programs (in cooperation with the government and managed care organizations) need to develop an infrastructure in primary care research, and to conduct and support primary care research.

Managed Care Organizations:

1. Managed care organizations need to identify and define their needs as to the number, types and competencies of physicians, and should communicate this information and provide feedback to medical schools and residency programs.

2. Managed care organizations need to work cooperatively and collaboratively with medical schools and residency programs in developing programs to address the physician workforce and medical education.

3. Managed care organizations (and all other third-party payers) need to share in the cost of paying for medical education, through an all-payer fund, and by developing mechanisms to support and encourage training and evaluation of medical students and residents in their sites. This could include:
   - bonus payments for teaching
   - sponsoring preceptorships and clerkships
   - residency programs in managed care environments or sharing sponsorship of a residency
   - teaching residents about practice management issues
   - collecting data regarding educational and training needs
   - collaborative health services research
   - collaborative development of standards of care
   - developing managed care leadership programs
   - innovative approaches and models of medical education.

4. Managed care organizations should work with external certifying and accrediting organizations to help address the issues identified in this report.

Government:

1. Continue to pay Medicare DME and IME for all residents who are graduates of US medical schools, but gradually reduce DME and IME for international medical graduate residents to 25 percent of the 1995 levels. Establish a transition program to assist institutions providing essential services which are dependent on IMG residents.

2. Upweight both DME and IME to encourage more generalist training and downweight DME and IME to discourage specialist training.

3. Provide both DME and IME payments for teaching in non-hospital settings, including physician offices, community health centers and managed care practices. Funding should follow the resident to his or her site of training.

4. Identify and remove the DME and IME components of the Average Adjusted Per Capita Cost (AAPCC) from Medicare capitation rates and utilize these funds specifically for GME purposes.

5. Create demonstration projects to foster the growth of consortia to manage medical education policy and financing.
6. Reauthorize, at 1995 pre-recision appropriated levels, the National Health Service Corps, Title VII (Health Professions Education), and primary care research funding.
7. Reauthorize the Council on Graduate Medical Education (COGME) to monitor the physician workforce and medical education system given the rapidly changing health care marketplace.
8. The federal government should play a major role in the collection and analysis of data regarding the physician workforce and medical education. This should include current data on staffing patterns in specific organizational forms of managed care (e.g., independent practice associations), information on the cost of medical education (medical students and residents) in ambulatory and managed care settings, and on the differences in the cost of training generalist and non-generalist physicians.

II. Growth of Managed Health Care

Managed health care has been defined as any organized, systematic intervention that can favorably affect the quality (e.g., technical quality, patient's health status, patient's satisfaction, provider's satisfaction) or cost of health care by linking purchasers, insurers, and providers (Moore, 1993; EBRI, 1994; Miller and Luft, 1994). Because this definition includes a variety of approaches, wherever possible this report refers to specific organizational forms of managed care such as staff or group model health maintenance organizations (staff or group HMOs), managed indemnity plans (MIPs), preferred-provider organizations (PPOs), independent practice associations (IPAs), networks and point-of-service (POS) plans, as outlined in Tables 1 and 2.

When the acronym HMO (health maintenance organization) is used without further qualification it refers to the broad family of integrated health systems that combine the delivery of health care and its financing on a prepaid basis. This definition of HMOs includes staff and group model HMOs, as well as networks and IPAs, but excludes PPOs.

Table 1 Definitions of Six Representatives Organizational Forms of Health Care Delivery*

Intensity of Managed Care	Organizational Form	Definition
Least Managed	Indemnity Plan with Fee-for-Service (FFS)	Complete freedom of choice to patients. Insurer reimburses physicians on a fee-for service basis.
	Managed Indemnity Plan (MIP)	Free choice and FFS, but insurer exercises some degree of utilization control to manage costs.
	Preferred Provider Organization (PPO)	Insurer channels patients to "preferred" physicians who are usually paid discounted FFS. The insurer, not the physician, usually accepts financial risk for performance.
	Independent Practice Association (IPA)	Insurer channels patients to physicians usually solo or in small groups who have agreed to some financial risk for performance. Payment may be either capitation of FFS with financial incentives based on performance.
	Network IPA	Similar to IPA but consists of a network of larger group practices. Payment is usually capitation to each group, which then pays the physicians.
Most Managed	Staff/Group Health Maintenance Organization (HMO)	The classic, prepaid, large multispecialty, group practice. Patients are covered only for care delivered by the HMO. The doctors are usually salaried and work either for the plan (staff model HMO), or for a physician group practice (group model HMO) which has an exclusive contract with the plan.

* Adapted from Moore, 1993. Not shown are hybrid arrangements such as open-ended and point-of-service (POS) arrangements whereby patients in a PPO, IPA, Network or Staff/Group HMO may have some insurance coverage for care outside of the providers approved by the insurer.

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Table 2 Management Incentives and Influences on Medical Practice of Six Representative Organizational Forms of Health Care Delivery *

Intensity of Managed Care	Organizational Form	Management Incentive	Influence on Medical Practice
Least Managed	FFS	None	None
	MIP	Utilization reviews	External regulation
	PPO	Utilization reviews and discounted fees	External regulation
	IPA	Financial risk in addition to utilization review	Physicians accepts financial risk for performance
	Network IPA	Group, business and social structures, in addition to financial risk and utilization review	Indirect: management personal, and cultural Direct: coordination, systems and structural design
Most Managed	Staff/Group HMO	Integrated multispecialty physician group and support services; usually in purpose built health center	

* Adapted from Moore 1993

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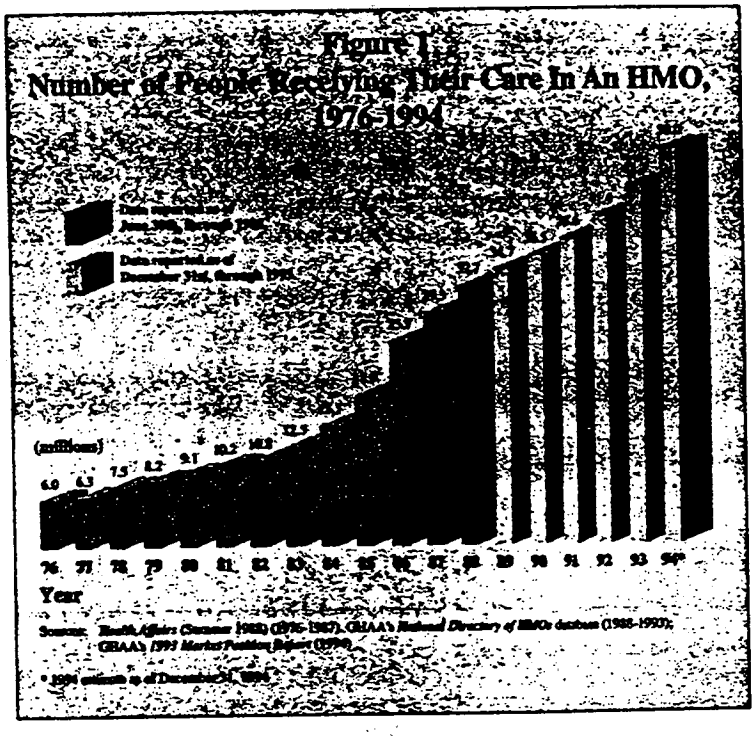
Finding # 1: Managed care has been growing rapidly in both the private and public sectors, and in most geographic areas, and this growth is likely to continue or accelerate in the future.

National Trends

Combined total enrollment in HMOs more than tripled in the past decade (Figure 1), reaching approximately 50 million enrollees at the end of 1994 (GHAA Market Position Report, 1994), and is expected to reach 56 million in 1995 (AM News, Dec. 26, 1994). Approximately half the patients in HMOs are enrolled in IPAs and about one-fourth (24.1 percent) in group-model HMOs. About one-sixth (17.5 percent) are in networks and only about one-tenth (11.4 percent) are enrolled in staff-model HMOs.

Point-of-service (POS) plans, which are also referred to as types of hybrid, mixed-model or open-ended plans, as well as preferred provider organizations (PPOs) have recently emerged as attractive alternatives. Between 1987 and 1992, the number of individuals enrolled in PPOs more than quadrupled from 12.2 million to 58 million. Enrollment in POS plans grew during the same time period from virtually none to 2.3 million. While slightly less than half the U.S. population with private insurance still remains in FFS plans, virtually all (approximately 95 percent) of these plans now include some sort of utilization review (EBRI, 1994; Iglehart, Nov. 1994) in which doctors and patients must seek approval for some treatments. While some physicians still remain uncomfortable with the tenets of managed care (Iglehart, 1994), nearly three-fourths of physicians recently reported having at least one managed care contract (AM News, Nov., 1994). Furthermore, recent (1993) data from the Socioeconomic Monitoring System of the American Medical Association indicate that nearly two-thirds of



physicians are involved in PPOs and almost half reported being involved in HMOs (Table 3).

Geographic Variation

Market penetration, defined as the percentage of the local population enrolled in managed care plans, varies widely throughout the country as does the rate of growth of enrollment within particular areas. California led the nation in HMO market penetration at the end of 1993 with approximately 11 million enrollees representing 35 percent of the state's total population. Although a similar rate of penetration is observed in Massachusetts at 34.1 percent, the total enrollment is approximately 2 million (GHAA National Directory of HMOs, 1994). Over 2 million patients were enrolled both in Florida and Pennsylvania, but these represent less than one-fifth of the total population of each state. High rates (over 25 percent) of market penetration are found in the less populated states of Arizona, Oregon, Rhode Island, and the District of Columbia.

In 1993, a region defined as Alabama, Kentucky, Mississippi and Tennessee showed the most rapid growth beginning from a low rate of penetration in the previous year. The western region defined as California, Oregon, Washington, and Hawaii showed the next-most rapid rate of growth even though penetration was already high. HMO enrollment in 1993 was zero in Alaska, West Virginia, and Wyoming, which is not uncommon in rural areas at the present time (AM News, Oct. 10, 1994). Table 4 presents recent data on the geographic distribution of HMO enrollees.

There is substantial variation in market penetration by HMOs when comparisons are made among particular urban market areas (Gold, 1991). In 1989 over 40 percent of the population was enrolled in HMOs in each of the two metropolitan statistical areas of San Francisco-Oakland-San Jose-Sacramento, and Minneapolis-St. Paul. At the other extreme, in New York-Northern New Jersey-Long Island-Connecticut only 11 percent were enrolled in HMOs at that time (Gold, 1991). Later data for more narrowly-defined geographic areas compiled in 1991 showed an eight-fold difference ranging from a low of 7 percent for Charlotte-Gastonia-Rock Hill, North Carolina, to a high in Rochester, New York where 54 percent of the population was enrolled in HMOs (GHAA National Directory of HMOs, 1994).

Concern has been expressed about the degree to which managed care will be able to address the health care delivery requirements of rural populations (Kronick et al., 1993). Weiner (1991) estimated rural enrollment in HMOs to be about half that of national rates. However, there are exceptions. Several HMOs, including the Geisinger Health Plan in rural northeastern Pennsylvania, serve predominantly rural areas. Geisinger's more than 150,000 members reside in 31 rural counties (GHAA Davis IOM, Dec., 1994). Forty-five primary care clinics staffed by 500 salaried physicians serve Geisinger's patients. The Geisinger HMO also contracts with other rural primary care clinics, approximately 450 private practice physicians, numerous community hospitals, and the Geisinger Medical Center, a teaching hospital affiliated with the Jefferson Medical College.

As another example of an HMO serving rural needs, one urban-based HMO, the Community Health Plan of New York, claims to have in actuality the largest rural enrollment of any managed care plan. Its service area covers approximately one-third of upstate New York, all of Vermont, and the three western-most counties of Massachusetts, covering in total about 31,000 square miles and about 3 million people. As of November 1994, its enrollment numbered 345,000. Its 38 staffed health centers employ about 300 physicians, two-thirds of which are in primary care. Its recent expansion, however, has been in the area of contracting with affiliated or "point-of-service" staff, containing 3260 physicians, of which only one-third are in primary care (Rural Health Research Program Directors' Meeting, November 1994).

A third example of a successful HMO serving rural needs is Itasca Medical Care (IMCare). It is a prepaid Medicaid managed care program serving the health needs of 4000 enrollees receiving public assistance within Minnesota's Itasca County. It began in

Table 3 Percent of Physicians Contracting with Health Maintenance Organizations (HMOs), Individual Practice Arrangements (IPAs) and Preferred Provider Organizations (PPOs), 1993

	Number of Responses	HMO Mean	Number of Responses	IPA Mean	Number of Responses	PPO Mean
All Physicians	3888	47.7	3824.0	26.0	3907.0	64.5
Specialty						
General/Family Practice	497	40.6	494.0	21.4	497.0	59.0
Internal Medicine	751	50.8	743.0	27.2	754.0	67.0
• General Internal Medicine	488	49.9	487.0	26.0	488.0	64.9
• Cardiovascular Diseases	121	51.6	117.0	30.0	125.0	69.5
• Other	142	53.6	139.0	29.7	141.0	73.2
Surgery	857	52.0	845.0	31.6	857.0	71.3
• General Surgery	230	51.6	225.0	35.2	228.0	70.6
• Otolaryngology	89	51.4	86.0	26.2	89.0	71.0
• Orthopedic Surgery	175	48.5	172.0	27.1	176.0	71.7
• Ophthamology	165	52.9	164.0	30.3	164.0	65.3
• Urological Surgery	88	54.3	90.0	41.4	90.0	83.9
• Other	110	55.6	108.0	28.6	110.0	71.3
Pediatrics	292	51.8	291.0	28.0	297.0	68.5
Obstetrics/Gynecology	275	59.0	273.0	30.5	279.0	73.0
Radiology	270	62.6	255.0	33.7	270.0	70.0
Psychiatry	236	23.1	236.0	10.9	238.0	44.9
Anesthesiology	221	54.8	210.0	28.7	223.0	67.9
Pathology	129	45.2	128.0	19.5	137.0	60.8
Other Specialty	360	36.4	349.0	20.5	355.0	52.5
• Emergency Medicine	156	29.9	152.0	11.4	152.0	40.4
• Other	204	41.8	197.0	27.9	203.0	62.1
Geographic Area						
New England	236	63.0	227.0	46.0	231.0	63.1
Massachusetts	106	73.0	101.0	48.4	104.0	77.7
Other	130	54.7	126.0	44.1	127.0	50.9
Middle Atlantic	659	43.7	646.0	19.9	655.0	45.5
New Jersey	132	53.8	128.0	32.3	131.0	47.7
New York	318	32.0	307.0	18.8	312.0	38.6
Pennsylvania	209	58.1	211.0	13.1	212.0	56.6
East North Central	591	53.9	578.0	24.0	593.0	70.1
Illinois	179	51.9	177.0	34.5	183.0	71.2
Michigan	108	66.6	101.0	13.4	104.0	65.7
Ohio	151	50.9	149.0	21.8	152.0	68.1
Other	153	50.2	151.0	21.8	154.0	73.8
West North Central	271	52.1	263.0	22.1	272.0	68.7
South Atlantic	699	43.3	683.0	20.1	703.0	66.9
Florida	191	50.9	187.0	13.4	191.0	75.7
Other	508	40.4	496.0	22.6	512.0	63.6
East South Central	218	31.8	223.0	16.1	225.0	68.5
West South Central	398	40.7	394.0	14.5	402.0	65.2
Texas	269	44.3	263.0	16.2	269.0	66.3
Other	129	32.7	131.0	11.0	133.0	62.6
Mountain	180	56.2	180.0	29.5	187.0	69.7
Pacific	636	50.8	630.0	44.0	639.0	72.7
California	475	50.1	469.0	50.9	478.0	73.3
Other	161	52.7	161.0	24.0	161.0	70.8
Practice Arrangement						
Self-Employed	2635	46.4	2623.0	29.1	2657.0	67.2
Solo Practice	1272	39.3	1268.0	23.5	1275.0	60.9
Two Physician Practice	313	47.8	313.0	36.0	314.0	74.1
Three Physician Practice	249	49.1	249.0	35.4	252.0	69.0
4-8 Physician Practice	501	53.1	503.0	36.4	512.0	74.8
Over 8 Physician Practice	298	67.2	288.0	31.9	302.0	76.7
Employee	1067	53.3	1021.0	19.4	1061.0	60.4
Independent Contractor	186	33.6	180.0	21.2	189.0	50.6

Source: 1993 Socioeconomic Monitoring System core survey. Sources are not reported if the number of responses is less than 25.

Table 4 Number of HMO Plans, Enrollees, and Percentages by Plan Characteristic, Year-End 1993

	No. of Plans	% of Plans	No. Enrollees	% Enrollees
ALL PLANS	545	100.0	45,205,347	100.0
PRIMARY MODEL TYPE				
Staff	57	10.5	5,133,588	11.4
Group	55	10.1	10,892,237	24.1
Network	94	17.2	7,912,121	17.5
IPA	339	62.2	21,267,401	47.0
REGION				
New England	39	7.2	3,405,727	7.5
Middle Atlantic	62	11.4	7,265,561	16.1
South Atlantic	92	16.9	5,864,300	13.0
East North Central	111	20.4	6,659,268	14.7
West North Central	47	8.6	2,740,286	6.1
South Central	73	13.4	3,227,401	7.1
Mountain	55	10.1	2,938,293	6.5
Pacific	66	12.1	13,104,511	29.0

Source: GHAA's National Directory of HMOs database

the early 1980's with several important goals: 1) to enhance reimbursement levels of publicly funded health care programs, 2) to slow the rapid growth of public funds with the cooperation of private enterprise, 3) to ensure access to health care for medically needy, 4) to provide quality and medically necessary care, and 5) to control utilization of medical services through cooperative efforts of the public, medical providers, and the patients. Its provider network is built on 28 primary care physicians in four clinics and eight referral specialty physicians (IMCare Director, October 1994).

While these and other examples of successful HMOs serving rural needs can be found, a recent study concluded that access to HMO services in rural areas decrease as county population density lessens, and adjacency to metropolitan area is an important predictor of inclusion in a service area (Ricketts, Slifkin, Johnson-Webb, 1995).

Private Employers

The national and regional trends mask the even more dramatic changes in health benefits purchasing decisions of large private employers. Responding to the increasing cost of employee benefits, large firms employing 200 or more have been among the most significant catalysts behind the rapid growth of managed care. Managed care plans have gained prominence because many private payers regard them as the best way to restrict the growth of health care expenditures (Iglehart, 1994). For better or for worse, employers are now selecting health plans largely on the basis of cost, because they contend that there is little information available on differences in quality (AM News, July 25, 1994). While the overall relationship between cost and quality in health care remains unclear (Starfield, 1994), groups such as the National Council on Quality Assurance (NCQA), which accredits HMOs, are taking the lead in documenting the quality of managed care.

The proportion of large firms' employees enrolled in HMO, PPO, and POS plans grew from 47 to 65 percent in just three years between 1991 and 1994. In 1994 only 6 percent of these firms' employees were still covered by indemnity plans that provided health insurance coverage without requiring precertification of benefits. While this movement away from traditional indemnity plans that allowed patients and their physicians to make independent choices largely reflects the decisions of employers as the purchasers of health insurance rather than the preferences of individual patients (Kassirer, Oct. 1994), reports indicate a high level of patient satisfaction with the change. Almost half of all large employers now offer their employees only one health plan. Employers view their ability to control their employees' "choice of health

plan as a key issue in the restructuring of health services delivery today" (*Health Benefits in 1994*. KPMG Peat Marwick, Oct. 1994). While earlier reports left unanswered the question of whether employers would be able to reduce their health care costs through managed care (GAO, Oct., 1993), it now appears that large employers prefer to limit the range of their employees' health care options as a means of continuing to provide access to high-quality care while also controlling cost.

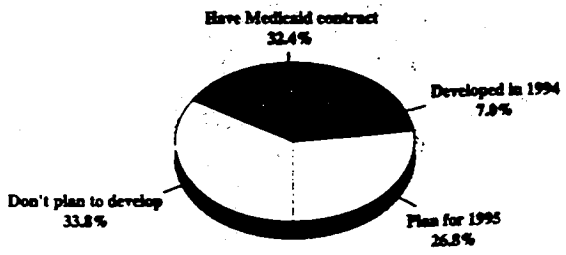
Federal Employees

The proportion of approximately 2.3 million federal employees covered by prepaid health care plans increased from 18 percent in 1984 to 39 percent at the end of 1993. The rate of change to prepaid health plans was similar among 1.7 million federal retirees, but increased from a smaller base of only 8 percent covered by prepaid health plans in 1984 to 15 percent in 1993 (FEHBP, Sept., 1994).

Medicaid

Federal and state spending on Medicaid rose 9.2 percent in 1993, following even higher increases of 15 percent in 1992 and almost 25 percent in 1991 (NYT, Nov. 27, 1994). As one response to the continuing high cost of providing health care to Medicaid beneficiaries, most states have been following the lead of private employers by rapidly developing or expanding their managed care programs (AM News, Dec. 19, 1994:11). From 1987 to 1992, states' total enrollment of Medicaid beneficiaries into managed care programs more than doubled, and included 3.6 million beneficiaries (about 12 percent of the total Medicaid population). In 1992, two-thirds of the states had managed care programs for Medicaid enrollees and nearly all states were expected to have programs in place by the end of 1994 (GAO, March, 1993). According to the Group Health Association of America (GHAA), 7 percent of HMOs surveyed developed new plans for Medicaid recipients in 1994, and one-quarter reported that they intended to do so in 1995 (Figure 2)

Figure 2
More HMOs Plan to Serve Medicaid Patients

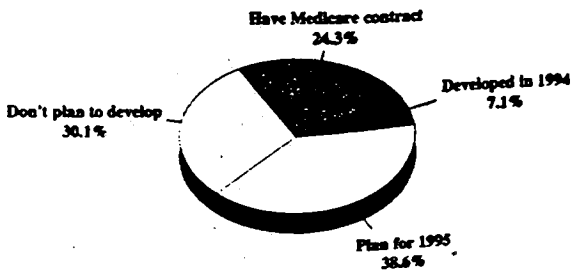


Source: GHAA HMO Performance Survey, 1994

According to the United States General Accounting Office (GAO), a common feature of managed care models in the Medicaid program is the role of a physician who takes responsibility for each patient's primary care, including controlling and coordinating all the patient's health services (GAO, March, 1993). Some states are using capitated models, while others use an approach referred to as "primary care case management" (PCCM). Under PCCM a physician receives a per capita case management fee to coordinate a patient's care, then receives additional reimbursement for specific services provided (GAO, March, 1993).

According to the GAO, it is not yet clear whether these programs actually save money (GAO, March, 1993). Nevertheless, the states with capitated programs report as an important benefit that their total Medicaid costs are becoming more predictable because of the fixed nature of capitation payments. Capitation therefore enables the states to establish a fixed budget for health care. The current expectations of state governments are high. A spokesman for the state of Tennessee, which recently moved all of its Medicaid enrollees into managed care, reported that "Enough money has been saved to extend coverage to an estimated 400,000 Tennesseans who lacked health insurance before, but were not poor enough to qualify..." (Newsweek, Dec. 5, 1994).

Figure 3
More HMOs Plan to Serve Medicare Risk and HCPP Patients



Source: GHAA HMO Performance Survey, 1994

Medicare

Since the early 1980s the Health Care Financing Administration (HCFA) has been encouraging HMOs to offer Medicare coverage to enrolled beneficiaries for fixed prepaid premiums. As of June 1992, approximately 1.4 million (3.9 percent) of the estimated 35.5 million Medicare beneficiaries in the U.S. were enrolled in 83 active Medicare risk plans (Brown et al.,

1993). This share rose to approximately 5.7 percent in December 1994, with growth currently projected to be approaching 7 percent of the population eligible for Medicare in 1995 (NYT, Jan. 11, 1995). Enrollment is growing at an annual rate of 12 percent and more than two-thirds of HMOs either provide care to Medicare patients or plan to develop a program (Figure 3).

The results of these programs have been difficult to evaluate. Some early evidence suggested that healthy beneficiaries were more likely to enroll in these HMOs (Brown et al., 1993). Patients with chronic health problems were less likely to enroll, but the capitation payment based on Average Adjusted Per Capita Cost (AAPCC) rates failed to anticipate fully this favorable selection bias. HCFA initially proposed that HMOs be paid 95 percent of the projected FFS costs for enrollees in discrete geographic areas. However, the actual cost of caring for the enrollees in HMOs was only 89 percent of the projected FFS cost, producing a gain for some HMOs and their patients, and a corresponding loss for HCFA (Brown et al., 1993).

An important finding of this Medicare risk contract experiment is that both HMOs and FFS providers delivered care of comparable technical quality. The reports from the patients themselves were also positive. Although the proportion of HMO enrollees who gave excellent ratings to the quality, access, and personal attention of their care was slightly lower than those in FFS, the HMO enrollees were much more satisfied with the cost of their care, than were the beneficiaries in FFS. Most importantly, 14 out of 15 of the Medicare enrollees in HMOs reported that they would recommend their plan to a friend or family member (Brown et al., 1993).

Table 5 National Committee for Quality Assurance (NCQA) Quality Measures

Member Satisfaction With Care Received
- Overall evaluation of plan
- Access to medical care
- Thoroughness of examinations
- Ease of seeing physician of choice
- Personal interest in you and your medical problems
- Satisfaction with outcomes of medical care
- Would recommend plan to others
- Intent to switch plan

Quality of Physician Network
- Physician turnover rates
- Board certification rates for:
  - primary care physicians
  - specialists

Membership and Financial Stability
- Member disenrollment rate
- Medical loss (expenses to premium) ratio
- Administrative loss (expenses to premium) ratio
- Revenue requirements per member per month (pm pm)
- Revenue requirements (pm/pm) per:
  - Employee
  - Employee spouse
  - Employee children
  - Family

Utilization Rates Per Enrollees
- Coronary bypass
- Angioplasty
- Cardiac catheterization
- Cholecystectomy
- Hysterectomy
- Prostatectomy
- Laminectomy
- Cesarean section
- Readmission for chemical dependency
- Obstetrical hospital stay
- Hospital days

Quality of Care (rates per enrollees)
- Childhood immunizations
- Cholesterol screening
- Mammograms
- Pap Smears
- First trimester prenatal care
- Regular diabetic retinal examinations
- Post-discharge follow-up after major affective disorders
- Asthma hospital admissions

Access to Care
- Percentage of members who visited a health plan practitioner within the last 3 years

Source: The Report Card Pilot Project. National Committee for Quality Assurance. Washington DC: NCQA, 1994.

Quality

In January 1994, the NCQA launched a one-year Report Card Pilot Project in collaboration with 21 health plans and key employer, consumer, health policy and labor representatives. NCQA created this project to test the feasibility of implementing a system of standardized performance measures that could provide timely information to purchasers, consumers, health plan executives, and others regarding the quality of care and service in managed care plans. The project determined that performance measures that are rigorously produced, audited and displayed in common format provide useful information on health care performance (NCQA 1994 Report Card Pilot Project/Technical Report). Table 5 displays the measures used to evaluate the performance of the participating plans.

A recent HMO industry-wide survey indicates that a majority of managed care plans provide consumer-based health management strategies that focus on the improvement of individual and population health status, and support personal health decisions that enable appropriate use of medical services. Research studies of these demand management strategies over the last 12 years have demonstrated significant reductions in employee sick time, absenteeism, outpatient utilization and costs, and even inpatient costs (Otis and Harmon, 1995).

A comprehensive review of the literature published from 1980 to 1994 analyzed the findings of 16 studies comparing the quality of health care provided in HMOs with care provided to similar populations in other settings. The study determined that the quality of care in HMOs was better than or equal to the care delivered in fee-for-service (FFS) plans on 14 of 17 measures. The study found that people cared for in HMOs consistently received more preventive care, such as breast, pelvic, rectal and general physical examinations, than people in FFS plans. HMO members also received more health promotion counseling than members of FFS plans (Clement et al., 1994). As more managed care organizations become more involved providing care to senior under Medicare risk contracts, the quality of care can be more carefully examined. The findings of similar high quality in Medicare HMOs are consistent with other studies of HMO quality.

What is being referred to as the quality care movement in managed health care can also be viewed as a manifestation of a broader set of fundamental changes taking place in the health care system (NYT,

Dec. 18, 1994), namely a transformation and industrialization of health care as described by Starr (Starr, 1982). Although there are many variations on the motif of managed care, each involves changes in the delivery and the financing of health care. These changes are developed to enhance the quality of care, while assuring that it is cost-effective.

Development of Integrated Delivery Systems: Employers and public insurers are gradually moving some of the decentralized control over the delivery of health care away from solo physician practitioners, so that often this control is concentrated in large networks that integrate the delivery of health services.

While there has been substantial geographic variation in the growth and market penetration of managed care, projections indicate that the overall trend (Figure 4) is irreversible (Figure 5). The five largest managed care firms (Blue Cross/Blue Shield, Kaiser, Prudential, United Healthcare and U.S. Healthcare) controlled 42 percent of the HMO business in 1994, and growth in enrollment continues to be most rapid in the large HMOs (AM News, Oct. 10, 1994). The total number of HMOs is declining, and the number of plans is expected to shrink further as the market increases. A recent newspaper report describes a billion-dollar bidding war among firms seeking to acquire one of the biggest publicly held HMOs in the West (NYT, Dec. 31, 1994). Light (1994) predicted the evolution of oligopolies similar to other large industries in the U.S. in which only a handful of large organizations will eventually dominate the health care market.

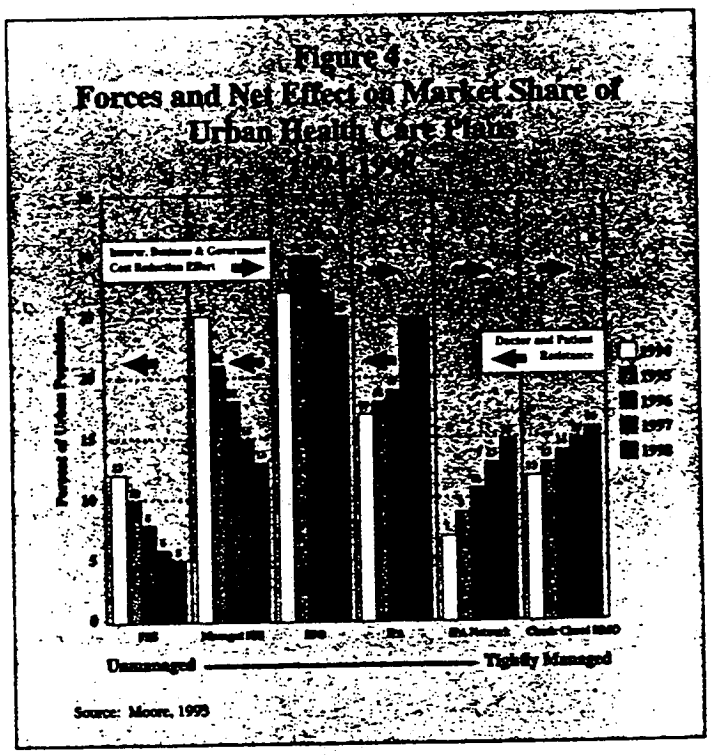


Figure 4
Forces and Net Effect on Market Share of Urban Health Care Plans

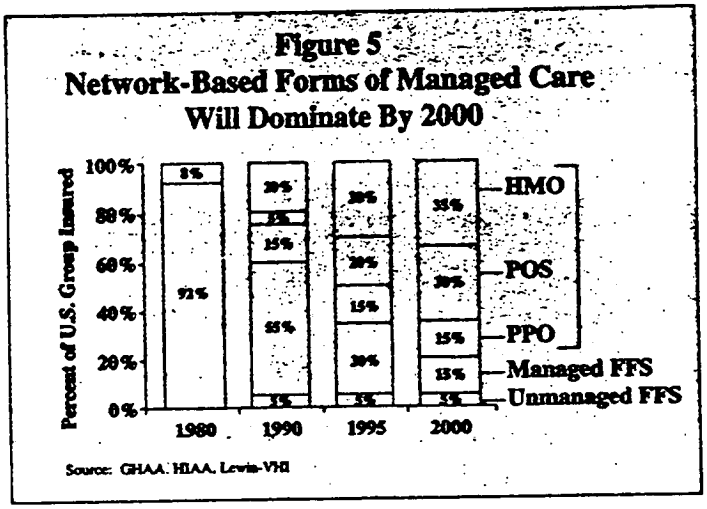
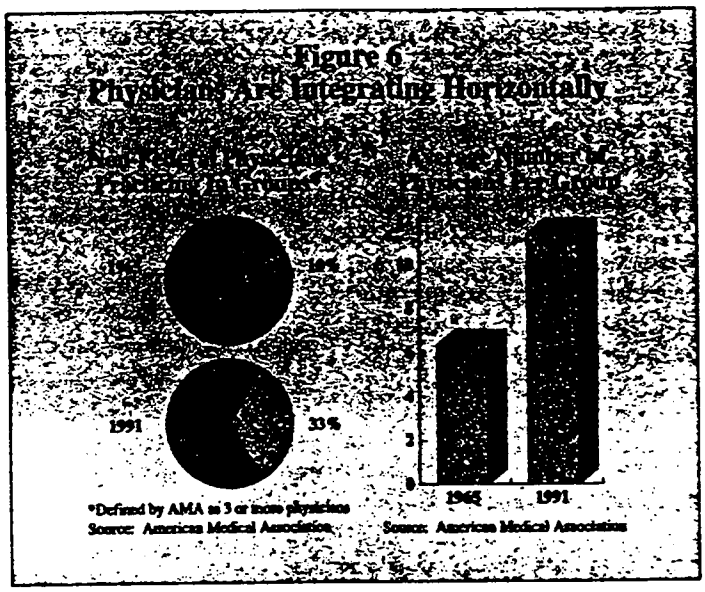


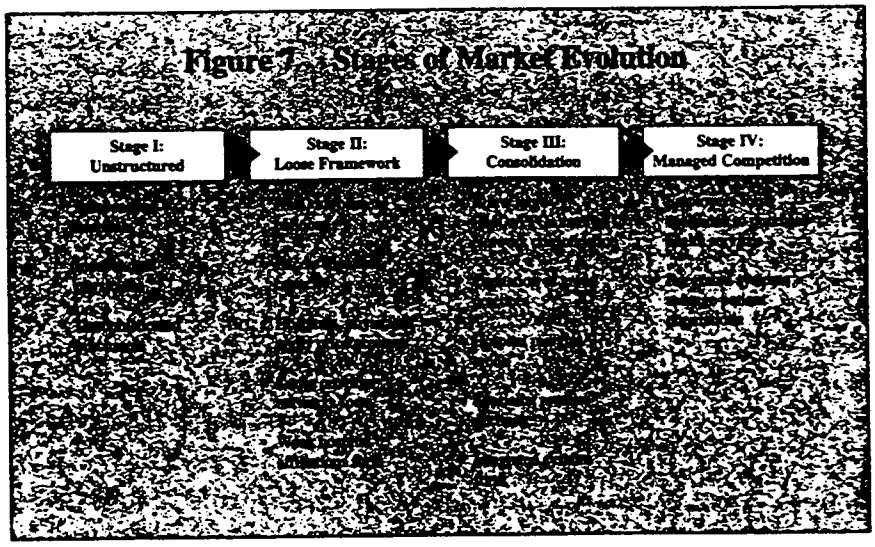
Figure 5
Network-Based Forms of Managed Care Will Dominate By 2000

In response to the growth of managed care, physicians increasingly are consolidating their practices and coming together in systems of practice that are more highly organized (Figure 6). The number of physicians in group practice grew from only 28,381 in 1965 to 184,358 in 1991 (AM News, Nov. 28, 1994). According to the same report, approximately one-third of physicians in 1991 were identified as employees. Information systems are playing a large role. The practice of medicine is changing in this way not simply because of economic imperatives, but because the technological and social demands on medicine have become too complex to be achieved except within collaborative frameworks. As a result, volume of service is shifting from being physician directed to being system directed. One consequence is that the implied guarantee of full employment that physicians have had through their ability to control volume of service is being lost. Another is that all physicians are developing practice styles that are more collaborative and cost-effective. (Cooper, 1994)

The development of integrated delivery systems are having a dramatic impact on physician practice as well as the structure and viability of hospitals and academic medical centers. Referrals to some academic medical centers have already begun to decline as physicians outside the teaching hospitals are choosing to treat more complicated cases in their own facilities (Iglehart, Nov., 1994). While this is due in part to the proliferation of specialists and ready availability of technology, it is also affected by capitation.

The Movement Towards Capitation and Assumption of Risk: The most highly developed managed care organizations rely heavily on capitation arrangements in which providers are paid based on a total number of patients under their care, referred to as "covered lives." These contracts provide a mechanism





for private and government payers to negotiate budgets for their total health care expenditures for a defined population during a fixed period of time. Under managed care, the organizations providing health care have a strong incentive to control the number and cost of services they provide because the fixed premiums amount to a budget (Iglehart, 1992, and Nov., 1994). The presence of a budget changes the behavior of the organization because the services of a provider that under a FFS system had been revenue centers suddenly become cost centers; i.e., the income of the provider is determined by the total number of covered lives enrolled rather than the actual services delivered to patients (AM News, Oct. 24, 1994:24). As a result, organizations begin to monitor expenditures systematically by scrutinizing the cost-effectiveness of many areas of clinical practice. One representative example is that the questioning of decisions by orthopedic surgeons to use high-quality implants in elderly patients instead of less expensive devices with shorter life spans (NYT, Nov. 23, 1994).

Most managed care organizations recognize the complexity of the decisions faced by physicians and other providers (AM News, April 11, 1994:4), and have provided leadership in measuring the quality of health care (NYT, March 31, 1994). Many have devised innovative information systems and compensation methods tied to objective measures of access, technical quality, patient satisfaction, and cost-effectiveness (Schlackman, 1993).

Future Trends

Although managed health care is experiencing variable growth throughout the United States, its evolution appears inexorable. Some observers have identified and categorized differential "stages" of managed care growth and penetration that are experienced across geographic areas (Figure 7 and Table 6). These stages provide useful insight into the changes that cities and regions can expect as managed health care delivery and financing systems mature.

The volume of health care being financed and delivered under managed care arrangements has been growing at a steady rate across geographic areas in both the public and private sectors (Hoy et al., 1991). The following predictions were made by Moore in his report to COGME in 1993:

> The future promises more pressures from government and business to improve the quality and cost-effectiveness of American medical care. In our current political and economic environment, "managed care" appears to be the approach most likely to be employed to achieve this desired level of performance. As a general rule, the best managed systems, utilizing the most effective management tools and securing the greatest cooperation of clinicians, will be the most likely to succeed. However, many doctors and hospitals, the targets of such pressures, are likely to resist this change as long as possible.
>
> The creative tension reflected purchaser pressure for improvement and provider resistance to change will impact on the characteristics and ultimately the growth potential of the different types of "managed care plans" outlined earlier. The plans, as outlined (Tables 1 and 2), employ an intensifying mix of management tools and doctor involvement in health plan performance. The continued demands of purchasers for performance create a "gradient" towards increasingly "managed" care and stimulates the growth of managed care. But doctors usually will abandon the insurance and delivery model that preserves their greatest auton-

Table 6 The Five Stages of Managed Care

Stage 1: Can't Spell HMO	Stage 2: Managed Care Emerges	Stage 3: Managed Care Penetration	Stage 4: Managed Competition	Stage 5: Post-Reform
• *Examples:* Pittsburgh, Little Rock, Savannah, GA • *HMO Enrollment:* < 10% of population • *Physician Income/Behavior:* (1) Traditional indemnity constitutes 60-70% of physician income (2) Community's best physicians toss HMO agreements in the trash can because their waiting rooms are full of nondiscounted patients • *Employer Activity:* Employer coalitions are primitive or nonexistent • *Hospital Procedures Done on Outpatient Basis:* < 15%	• *Examples:* Dallas, Philadelphia, St. Louis, MO • *HMO Enrollment:* 10-15% of population • *Physician Income/Behavior:* Many physicians retrieve their HMO contracts from the garbage • *Employer Activity:* Big local employers form health care purchasing coalitions • *Market Changes:* Recognition of managed care's inevitability spawns formation of physician-hospital organizations, primary care-based medical groups, and regional preferred hospital networks • *Hospital Procedures Done on Outpatient Basis:* < 20%	• *Examples:* Baltimore, Chicago, Kansas City, Boston, MA • *HMO Enrollment:* 15-25% of population • *Physician Income/Behavior:* Primary care physicians are capitated, but not specialists or hospitals • *Employer Activity:* Employers demand data on costs and quality and use this information to selectively contract with hospitals • *Market Changes:* (1) Hospitals face 15-25% drop in patient days and revenue within a 3-year period. A chaotic period of active networking and shifting alliances among hospitals. (2) Insurance companies, HMOs, and hospitals compete to purchase physician groups. (3) Single-specialty groups, recognizing their vulnerability, link to primary care groups • *Hospital Procedures Done on Outpatient Basis:* <35%	• *Examples:* San Diego, Los Angeles, Seattle, Sacramento, CA • *HMO Enrollment:* 25-40% of population • *Physician Income/Behavior:* Specialists and hospitals are capitated • *Market Changes:* (1) Regional hospital networks consolidate redundant services, close inpatient beds, and shed from their provider panels those physicians with subpar performance. (2) Managed competition between regional integrated physician-hospital networks picks up. • *Hospital Procedures Done on Outpatient Basis:* >40%	• *Examples:* Minneapolis/St. Paul, Albuquerque, NM • *Employer Activity:* Employer coalitions attempt to purchase on the basis of quality • *Market Changes:* (1) Provider networks merge with HMOs or insurance companies to form truly integrated delivery systems engaging in survivable competition. (2) Competition sharpens between for-profit and not-for-profit HMOs. (3) All high-tech services are regionalized. • *Hospital Procedures Done on Outpatient Basis:* >50%

Source: Futurist Russell C. Coile, Jr., President of the Health Forecasting Group, Santa Clarita, California, cited in Jansen, Bruce "Experiment Gone Wrong: Execs Want to Avoid 'Another San Diego'" *Internal Medicine News*, June 15, 1995, page 27

omy only when forced to do so by that model's relatively poor performance. Thus, the least restrictive model — full choice indemnity plans with fee-for-service (FFS) reimbursement — has been giving way sequentially to MIPs and PPOs. Further performance pressure has led insurers to offer, and doctors to join, IPA models in which they assume greater risk for performance.

In the short run (over 5-10 years), the IPA model is most likely to be the beneficiary of a reformed managed care system. Preferred provider organizations have few external controls and little involvement of physicians in the processes of care and in overall clinical outcomes. With their greater incentives for doctors to manage processes of care — referrals, test and procedure ordering, emergency room, and hospital use — IPAs should outpace PPOs and MIPs in cost-effectiveness. They are more attractive to consumers than the staff or group model HMO because they offer wider choice of doctor and more locations of care. They enjoy low fixed costs and an elastic doctor population, whereas staff or group model HMOs must recruit doctors and finance the acquisition of buildings to serve their members. In summary, the cost structure of IPA models is likely to be less expensive and more flexible than that of staff or group model HMOs.

Nevertheless, the closed panel staff or group model is potentially the most strongly managed form of health care delivery if it can overcome its inherent limitations. It most tightly integrates insurance, a structured delivery system, and dedicated physicians into a system that shares values and takes full responsibility for performance. Shared facilities, large size, and business and organizational form make it easy to employ "industrial strength" management and systems tools to improve performance and to initiate clinical innovations that lead to improved quality outcomes at lower costs. If staff or group models are able fully to use these advantages, they might ultimately replace most IPA-based competitive plans in cities with sufficient population density to minimize the problems of geographic access (Moore, 1993).

In summary, continued pressures from government and business to increase the quality and cost effectiveness of medical care will reinforce this trend of managed care growth. This trend appears to be irreversible. With increased interest in expanding Medicare and Medicaid managed care enrollment, many experts predict its growth rate may even accelerate.

III. Potential Impact of Managed Care on Physician Workforce Supply and Requirements

Finding # 2: The growth in managed care will magnify the physician workforce concerns expressed by COGME in prior reports, that there is a large and growing oversupply of physicians overall and especially of specialists and subspecialists, and that there is a modest need for more generalist physicians.

An important question being raised by policymakers is whether the changes taking place in the delivery and financing of health care under the guise of managed care will have any substantial impact on the nation's staffing requirements for physicians. If so, the question that follows is how any changes in the requirements for physicians will be satisfied by the supply of patient-care physicians in the workforce.

One major variable in the equation is the concept of primary care (Fox, 1994). Primary care, which has been endorsed enthusiastically by the most tightly controlled forms of managed care, can refer to a function of a health care delivery system (Starfield, 1992) as well as of a type of health care provider. According to a recent definition advanced by the Institute of Medicine (IOM), primary care is an array of "integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community" (Donaldson et al., IOM, 1994). Some ambulatory care provided by physicians, as well as non-physicians, is not necessarily primary care according to the IOM definition. *Ambulatory care* refers to any care not provided on an inpatient basis, such as in physicians' offices, clinics, emergency rooms. Often this ambulatory care is delivered by specialist physicians. Examples include allergy/immunology, dermatology, emergency medicine, medical and pediatric subspecialty care, ambulatory surgical care, etc.

Generalist physicians are trained to address the large majority of personal health care needs, and include family physicians, general internists, general pediatricians, and general practitioners (Kindig, 1994). Most generalists provide primary care for patients, but some do not, such as those who choose to work in emergency departments, or who limit their practice to areas such as sports medicine. *Specialist physicians* are those who are trained and practice in specific specialty areas of medicine rather than, as generalists do, to address a broad range of health care needs.

Non-physician providers (NPPs) include, for example, physicians' assistants, nurse practitioners, nurse midwives, nurse anesthetists and optometrists. Some of these providers deliver a broad spectrum of services in primary care, while others provide more limited services that is not primary as they work with specialist physicians in either ambulatory or hospital settings (Weiner, 1994).

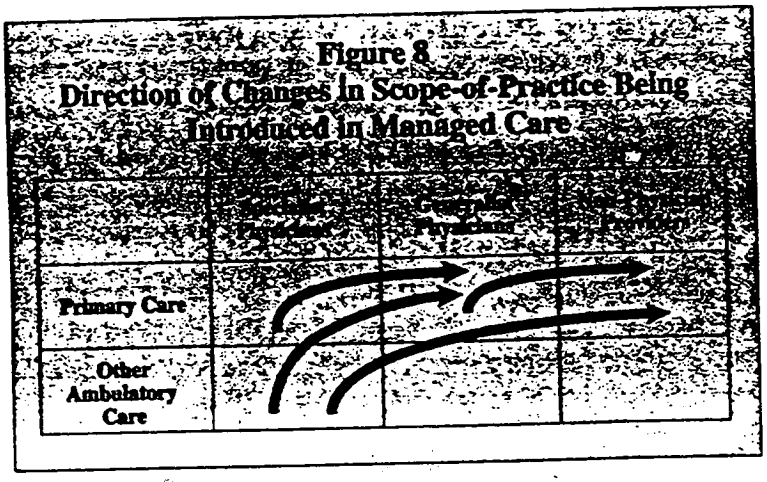
Roles of Providers in Managed Care Organizations

Health maintenance organizations (HMOs) have long embraced the concept of primary care as a means of promoting health, preventing illness, diagnosing the early onset of disease, and managing all the patient's encounters with the health care delivery system (Veloski and Howell, 1994). As confirmed by a recent study of 23 representative HMOs, they show a strong preference for generalist physicians providing this primary care (Felt et al., 1994). While subspecialists in internal medicine have completed three years of an internal medicine residency to prepare them as generalists physicians prior to subspecialization, a recent study found that many HMOs "generally view subspecialists in internal medicine as inappropriate primary care providers" (Felt et al., 1994). The same study reported that, for similar reasons, obstetrician/gynecologists are not often recognized by HMOs as providers of primary care. However, 15 of the 23 plans studied did report that they allow patients to self-refer on a limited basis without the plan's approval for some care from obstetrician/gynecologists. Furthermore, legislation is being developed in some states to designate obstetrician-gynecologists as primary care physicians.

While some HMOs find it difficult to recruit generalist physicians (AM News, Aug. 8, 1994:1), others have been successful in securing the number they need (Palsbo and Sullivan, 1993; Felt, 1994). Recent data suggest that rural plans and those with very high Medicaid enrollments face the greatest difficulties. The preferences of adult patients for either family physicians or general internists vary according to historical patterns in the local area. In one study plans associated with a multispecialty group reported a preference among patients for general internists (Felt et al., 1994).

Figure 8 summarizes the general direction of some of the changes in the roles of physicians being observed in managed care organizations. Some are acting either directly through continuing medical education or indirectly with financial incentives to broaden the scope of

Figure 8
Direction of Changes in Scope-of-Practice Being Introduced in Managed Care



practice of generalist physicians and decrease referrals to specialist physicians (Felt, 1994). Examples of medical areas increasingly managed by generalist physicians include dermatology, musculoskeletal problems, and women's health problems. Other examples include the diagnosis and management of long-term illnesses that might otherwise be provided by a subspecialist in internal medicine (e.g., cardiology, endocrinology, rheumatology) and office surgery that might otherwise be referred to a general surgeon (Iglehart, Nov., 1994).

The relationships of physicians to other providers such as physician assistants (PAs), nurse practitioners (NPs), nurses, psychologists, physical therapists, and optometrists continue to change (AM News, Dec. 5, 1994:3), but systematic data on the changing role of non-physician providers (NPPs) in managed care settings as well as other settings are still limited (Sekscenski et al., 1994). Some evidence suggests that PAs and NPs are providing substantial primary care in a majority of staff and group HMOs. But both Weiner (1994) and Cooper (1994) estimate that about half the effort of PAs and NPs is devoted to providing specific types of ambulatory care (orthopedics, dermatology, and women's health) rather than primary care in general. In addition, specialized services such as mental health counseling, eye care, anesthesia, and physical therapy, as well as some specialized procedures in cardiology, gastroenterology, and surgery are being performed by trained and supervised NPPs. It appears that the less centralized structure of IPAs and networks has not yet encouraged the use of non-physician providers to the same degree in primary and specialty care. But the financial incentives linked to increasing numbers of patients being reimbursed under capitation in these settings are likely to change this situation and in some cases lead to greater use of NPPs.

Forecasts of Supply and Requirements

Assumptions Underlying Forecasts: uantitative forecasts of the number of physicians needed and those available to provide patient care at some future point are usually controversial (Wennberg et al., 1993). One of the reasons there have been misunderstandings and debates about these forecasts of the national requirements versus supply of physicians is that seemingly minor differences in certain key assumptions embedded in these quantitative models can create wide discrepancies among forecasts over time. The accuracy of models depends ultimately on the validity of these key assumptions.

Supply: Any forecast of the supply of physicians begins with a baseline group of all active, full-time physicians, usually those reported in the masterfiles of the American Medical Association and American Osteopathic Association. Some forecasts specifically exclude physicians working full time in teaching, research, or administration. Other forecasts exclude residents and physicians working part-time. If faculty, or house staff, or both are included in projections related to the delivery of patient care, the forecasters must determine how each unit of a physician full-time equivalent (FTE) is to be counted. It is agreed that residents, fellows, and faculty physicians usually see fewer patients per week than full-time patient-care physicians. Some forecasters apply corrections to estimate for the differences in productivity of house staff at different levels of experience. Also, it has been reported historically that women physicians as a group work fewer hours per week and, on average, see fewer patients. However, COGME believes that there is currently no evidence to show that an increase in the number or proportion of women physicians produces a significant decline in effective physician supply (COGME *Fifth Report*, 1995).

These assumptions about number of hours worked per week and how these correlate to one FTE are even more important when considering the impact of variation in productivity in different practice settings. In this regard it is noteworthy that Weiner (1993) reported that his forecasts were sensitive to changing assumptions regarding physician productivity.

A second set of assumptions must be made about the flow of physicians from the medical education pipeline: e.g., the number of physicians in house staff positions and the rate at which they leave postgraduate education to enter practice, or alternate career paths including administration, research, or teaching. Deciding how to handle this movement has been particularly challenging in the past five years as the number of residency positions has increased dramatically, many being filled by international medical graduates (IMGs). One earlier study predicted no surplus of physicians in the year 2000, but assumed that the number of residents would remain constant at the 1983 level of 77,000 (Schwartz et al., 1988). By 1994 the

total number of residents had risen to over 104,000 (Shine, 1995). Forecasts must include the number of foreign physicians who will remain in the U.S. Also, since there has already been some speculation about the potential to reduce the size of residencies in some specialties, forecasts must take into account various scenarios related to the reduced number of new physicians entering the workforce.

A third set of assumptions must be made about the rate at which physicians leave practice. While there is historical evidence to support assumptions about physicians' rate of retirement and movement to non-clinical careers, there is little recent longitudinal information about the rate at which physicians are now moving to administration, research, or other non-clinical careers (Kaufman, 1995). Furthermore, anecdotal evidence suggests early retirement (either complete or semi-retirement) among some physicians who have been unhappy with the changing health care environment. It is possible that older physicians, particularly specialists in oversupply, might retire early (Cooper, 1994). Although historically work-related disability claims have been almost negligible for physicians, a recent report described a five-fold increase in such claims (NYT, Nov. 28, 1994).

Finally, when forecasts for generalist physicians and specialist physicians are generated separately, implicit assumptions are made about who actually delivers primary care (Kravitz et al., 1992; Spiegel et al., 1983). It is usually assumed that only generalist physicians deliver primary care, and that specialists do not deliver primary care. However, it is important to concede that the conventional distinction between generalist physicians and specialist physicians is an artificial dichotomy. This distinction does not necessarily operate as such in actual medical practice (Wartman, 1995). There is even variation among types of generalists. Requirements need to be related to different patient age groups since pediatricians have different qualifications than general internists, but family physicians may care for either pediatric or adult patients. The role of general internists and family physicians with Certificates of Added Qualification in Geriatrics has not always been clarified in certain forecasts, but it is reasonable to assume that those who deliver primary care to elderly populations can be counted as generalists, rather than specialist physicians (Reuben et al., 1993).

When residents are included in supply estimates, it is challenging to allocate the amount of time they devote solely to primary care. Residents spend time in both the hospital and ambulatory settings, but their responsibilities in the ambulatory setting include a mix of primary care as well as other types of ambulatory care. The extent of primary care delivered by subspecialists in internal medicine (sometimes referred to as "principal care") continues to be debated. What is unclear at this point is the degree to which physicians, particularly subspecialists in internal medicine or pediatrics, can shift the direction of their careers to function as generalist physicians providing primary care (AM News, Oct. 24, 1994:3). Similarly, it remains uncertain whether other types of physicians will choose to participate in educational programs to strengthen their skills as generalists. Early informal reports suggested limited interest in such career changes, but more recent reports challenge this supposition (AM News, Dec. 12, 1994). Finally, the decision as to who will be chosen to delivery primary care in managed care settings may ultimately be more closely tied to issues around board eligibility and certification (AM News, Dec. 12, 1994). A recent report of the GHAA indicates that 85 percent of physicians in HMOs are board-certified as compared to 61 percent of physicians overall (AM News, Dec. 26, 1994).

Feil and colleagues (Feil et al., 1993) in 1993 reviewed six substantial, published forecasts of total physician supply in the year 2000. While there was uniform agreement among all that the supply of physicians would exceed projected requirements at the turn of the century, the methods of enumerating the physician supply produced estimates of the total number of physicians who would be practicing in the year 2000 that ranged from 525,000 to 725,000. It is therefore essential to understand some of the key assumptions being made in projections of the physician workforce when considering the potential impact of managed care on the nation's requirements and on the supply of physicians to be educated (Weiner, 1994).

Requirements: The total requirements (i.e., projected staffing needs) for physicians are generally expressed in terms of a ratio of generalist physicians to specialist physicians, or a ratio of number of physicians per population unit of patients (Kindig, 1994). A challenge in forecasting these requirements in recent years has been projecting the extent of the population covered by health insurance. It is understood that some services are currently being provided by house staff, but it is difficult to determine how the staffing requirements currently being fulfilled by house staff can be taken into consideration. Changes in immigration, the age distribution of the population, life expectancy, and the epidemiology of diseases such as AIDS will affect requirements for specialist physicians. Requirements will also be influenced by the impact of non-physician providers and the growing possibility that certain procedures such as sigmoidoscopy will be performed by specially trained NPPs

Table 7 HMO Current FTE Staffing Estimates Physicians per 100,000 Population

	Generalists	Specialists	Total
Seven Kaiser Plans (1)	54	58	112*
Kaiser Portland (2)	56	81	137
GHA Seattle (3)	57	65	122
GHAA Fax Survey 4-1-93 (4)	88	50	138
GHAA Industry Profile 1993 (5)	71	61**	132**
Kindig/Rentmeester Study (6)	62	73	135
Tarlov (7)	66***	54	120
Range	54-88	50-81	112-138

* Mulhausen and McGee forecast the physician-to-population ratio in 2000 to be 129/100,000, but do not forecast the generalist/specialist mix.
** Specialists ratios may not reflect all FTE counts. As a result GHAA reports a total FTE physician ratio of 120/100,000.
*** Includes ob/gyn.

1. Mulhausen R. and McGee J. Physician need: An Alternative Projection From a Study of Large, Prepaid Group Practices. JAMA. 1989. 26(13): 1930-1934.
2. Hooker R. "The Role of Physician Assistants and Nurse Practitioners in a Managed Care Organization" in D.K. Clawson, M. Osterweis (edits.) The Role of Physician Assistants and Nurse Practitioners in Primary Care. The Association of Academic Health Centers, Washington, D.C. 1993.
3. Kronick R. Goodman DC. Wennberg J. Wagner E. The Marketplace in Health Care Reform: The Demographic Limitations of Managed Competition. N Engl J Med. 1993. 328(2): 148-52. (also related NAPS document #04998).
4. GHAA survey conducted 3/31/95, on behalf of BHPr and the Clinton Health Care Task Force (unpublished data).
5. Group Health Assoc. of America, Inc., Patterns of Enrollment. GHAA, Washington, D.C. 1993.
6. Rentmeester K and Kindig D. Physician Supply by Specialty in Managed Care Organizations. Testimony before PPRC. Dec 9, 1993.
7. Tarlov A. HMO Enrollment Growth and Physicians: The Third Compartment. Health Affairs Spring 1986.

Source: *COGME Eighth Report. Patient Care Supply and Requirements: Testing COGME Recommendations.* Council on Graduate Medical Education. U.S. Department of Health and Human Services. 1995.

rather than by physicians (AM News, Dec. 5, 1994). Assumptions need to be made about the effect of progress in technology (e.g., expert systems, decision aids, telemedicine, new drugs obviating the need for certain types of surgical procedures) and the resulting impact on the indications for procedures currently performed by specialists.

Forecasts of Physician Supply and Requirements: Quantitative forecasts of supply and requirements have played a role in the formulation of federal policy in recent decades (Mullan et al., 1994; Rivo and Satcher, 1993). As recently as the 1960s and 1970s policymakers were concerned about a shortage of physicians in the U.S. This finding spawned initiatives at the federal and state levels to support the development of new medical schools and to expand the number of new students matriculating at existing institutions. The total number of MD- and DO-granting medical schools was expanded and class size was increased at many medical schools. It was hoped that one of the added benefits of this expansion would be that the larger supply of physicians would help to alleviate shortages in medically underserved areas.

During the same period biomedical science was growing rapidly and Medicare was also introduced. Together they provided the intellectual and financial support for the rapid expansion of graduate medical education and the creation of new specialties in medicine. Hospitals increased the size and variety of residency and fellowship training programs. Concern about a potential surplus of physicians just as quickly emerged. It is useful to recall that in 1981 the report of the Graduate Medical Education National Advisory Committee (GMENAC) recommended a reduction in medical school class size, a sharp restriction on the entry of international medical graduates, and a freeze on the number of non-physician providers being trained (GMENAC, 1981). "Had these recommendations been implemented, even partially, it is unlikely we would be confronting the bulge in physician supply that is certain to occur after the turn of the century" (Cooper, 1994).

The Council recently completed a technical paper entitled *Patient Care Supply and Requirements: Testing COGME Assumptions* (COGME, 1995). (The technical paper is being finalized and issued as the COGME *Eighth Report*.) This section summarizes the key findings in the *Eighth Report*.

During the four decades between 1950 and 1990, the ratio of patient care physicians to the U.S. population increased by almost two-thirds, from about 112 physicians per 100,000 population to 182 physicians per 100,000. However, during the period 1965-1992, the ratio of generalist physicians changed little, from 59 to 67 physicians per 100,000, while the ratio of specialist physicians increased dramatically, from 56 to 123 physicians per 100,000. This trend, addressed in previous reports of COGME, has led to recommendations that policy-makers take steps to reduce the number of residency positions and increase the proportion of medical students who pursue careers as generalist physicians.

The *Eighth Report* provides estimates of the requirements for physicians based on the latest projections of the portions of the population that will be covered by various forms of health insurance. This forecast focuses particular attention on recent estimates of the staffing levels for physicians working in health maintenance organizations (Table 7). The data on staffing levels in HMOs have generally shown that fewer specialist physicians are needed to provide care to populations enrolled in tightly-controlled (capitated) managed care settings.

Estimating Physician Staffing Requirements: Five studies in Table 8 project physician requirements into the next century. Four of these utilize demand-based methodologies while one study, GMENAC, used a needs-based methodology to estimate requirements for practicing physicians. While the GMENAC model projected physician need based upon the prevalence of illness and estimates by provider panels of physician services required to handle these illnesses, the demand-based models base their assumptions upon the manner in which medical services are paid (e.g., the percentage of capitated managed care vs. fee-for-service) and project current patterns of utilization to the

future under various assumption. COGME placed special emphasis upon those demand models which assume increasing domination of the health care system by managed care arrangements (Table 8, BHPr Managed Care Scenario and Weiner estimates). These systems use fewer patient care physicians per 100,000 population and a higher proportion of generalists than do the fee-for-service arrangements which previously have dominated health care delivery in this nation.

All the above scenarios project generalist requirements for the year 2000 and the year 2020 in the same range. COGME concludes that a reasonable projected requirements range for generalist physicians would be approximately 60 to 80 patient care generalist physicians per 100,000 population.

Although all five scenarios placed generalist requirements in the same range, projections of specialists requirements vary markedly. The Cooper scenario as well as the BHPr's Utilization-based Fee-for-Service scenario anticipate increasing demand for specialists as a result of demand for utilization of new technology and the availability of additional specialists. The BHPr's Managed Care scenario and the Weiner model project much lower requirements in the year 2000 as a result of economies brought on by managed care. The GMENAC model, utilizing a totally different methodology, projects year 2000 requirements only slightly higher then the Weiner and BHPr's Managed Care models. Further, the BHPr's managed care model projects no further increase in specialist requirements in the early 21st century as increasing efficiency is obtained from the health care system.

COGME concludes that the managed care dominated system projections provide the most realistic projections of specialist physician utilization in the early 21st century. Those analyses assume that managed health care systems will require fewer specialists per population than exist under the current fee-for-system, that new technological advances are as likely to reduce demand for specialists as increase demand, and that non-physician providers may continue to provide a range of specialty services that physicians traditionally provided. From these managed care analyses, COGME concludes that a reasonable projected specialist physician requirements range in the early 21st century would be approximately 85 to 105 specialist physicians per 100,000 population.

Comparing Supply and Requirements: Given the current production (i.e., 25,000 first year residents, equivalent to the number of US medical students graduates plus 40 percent) and specialty output (i.e., 30 percent generalists:70 percent specialists), the patient care specialist supply is projected to increase from 140 to 150 specialists per 100,000 between the year 2000 to 2010. This compares with COGME's estimated specialist physician staffing requirements of 85 to 105 specialists per 100,000 population in a managed care dominated environment. This would translate into a projected surplus of 125,000 specialists in the year 2000 and 170,000 in the year 2010. During the same period, the generalist supply is projected to remain stable at 63 to 67 generalists per 100,000 population, compared with COGME's estimated staffing requirements of 60 to 80 generalists per 100,000. This would represent a modest shortage of 20,000 generalists in the year 2000 declining to 8,000 (or near balance) in 2010. The potential for physician underemployment or unemployment as we enter the 21st century is suggested by this and other workforce analyses, whether they assume that managed care or fee-for-service arrangements will predominate.

Figures 9 through 12 summarize the relationship between the projections of the requirements contained in the paper versus the supply of generalist and specialist physicians in the early part of the next century. These figures illustrate the relationship between requirements and supply of physicians as a function of certain key assumptions regarding the number of residents in training and the specialty choice of resident graduates. The range of estimates of requirements for generalist and specialist physicians are displayed as density functions in physicians per 100,000 (require-

Table 8 Generalist and Specialist Patient Care Requirements & Forecasted Supply Under Current Trends

	Physicians per 100,000 Population					
	Year 2000			Year 2020		
	Gen.	Spec.	Total	Gen.	Spec.	Total
BHPr Managed Care Scenario (1)	77	96	173	81	92	173
WEINER (2)	59	82	141	—	—	—
GMENAC (3) (4)	72	106	178	—	—	—
BHPr Fee-for-Service Scenario Utilization-based (5)	69	138	207	76	149	225
COOPER (6)	75	128	203	75	148	223
REQUIREMENTS RANGE	59-77	82-138	141-207	75-81	92-149	173-225
SUPPLY	63	140	203	66	148	214

1 Gambel S. Politzer R. Rivo M. Mullan F. Managed Care on the March Will the Physician Workforce Meet the Challenge" Health Affairs. Summer 1995

2 Weiner, Jonathan P. Forecasting the Effects of Health Care Reform on U.S. Physician Workforce Requirements Evidence from HMO Staffing Patterns JAMA. 1994, 272(3): 222-30

3 Bowman M.A. Katzoff J.M. Garrison L.P. Wills J. Estimates of Physician Requirements for 1990 for the Specialties of Neurology, Anesthesiology, Nuclear Medicine, Pathology, Physical Medicine and Rehabilitation, and Radiology: A further Application of the GMENAC Methodology JAMA. Nov 18, 1983, V250.

4 Summary Report of the Graduate Medical Education National Advisory Committee. Sept. 1980. Vol 1. US Dept of Health and Human Services pub. No (HRA) 81-651 Office of Graduate Medical Education, Health Resources Administration. April 1981

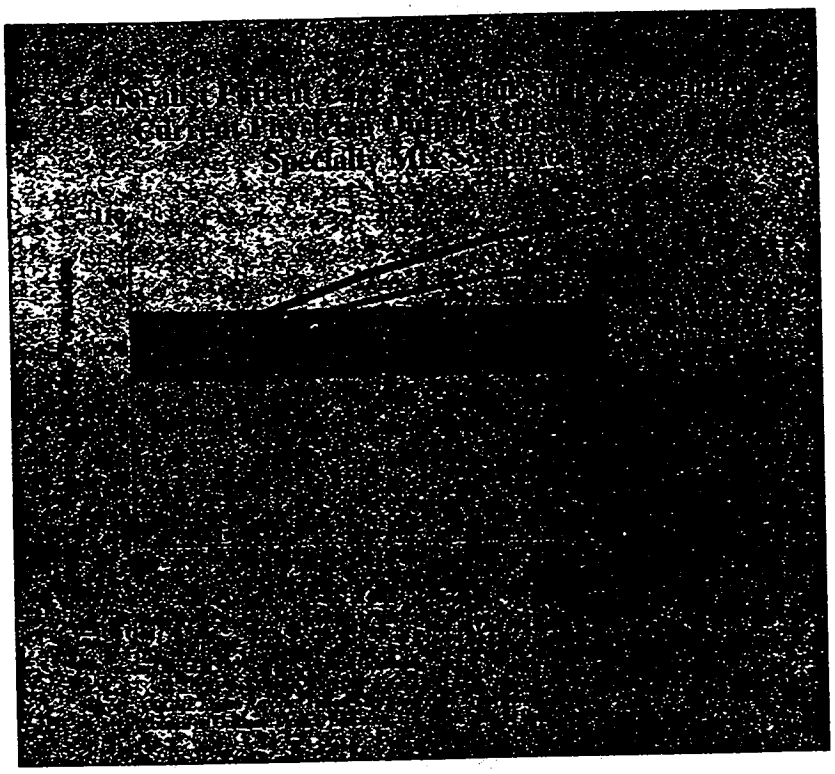
5 Refinements to BHPr Requirements Forecasting Model. Vol II Data and Methodology Prepared by Vector Research, Inc under contract to BHPr. HRSA. April 1993.

6 Cooper R. Seeking a Balanced Physician Workforce for the 21st Century JAMA. 1994, 272(9): 680-87.

Source: *COGME Eighth Report: Patient Care Supply and Requirements: Testing COGME Recommendations* Council on Graduate Medical Education. U.S. Department of Health and Human Services. 1995

ment bands). These ranges are based on assumptions regarding the size of the population and the staffing requirements of a projected mixture of fee-for-service settings and managed care.

Figure 9 compares generalist patient care supply and requirements assuming the current number of residents in training — about 140 percent of 1993 U.S. graduates and then varies the generalist/specialist mix of residency graduates. If only 30 percent of medical students pursue generalist careers (higher than the current rate), the supply will not be sufficient to reach the midpoint of the requirements range, but is within the lowest part of the band. An increase in the proportion of students entering generalist careers to 40 percent or higher would provide a more comfortable margin of generalist physicians and would help to prevent any shortage in later years.



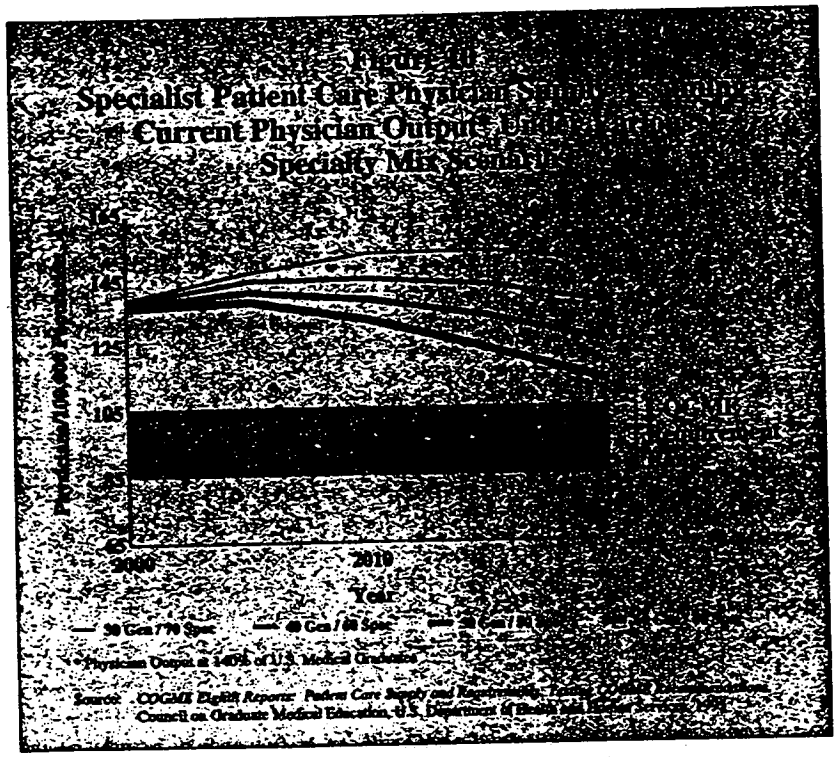


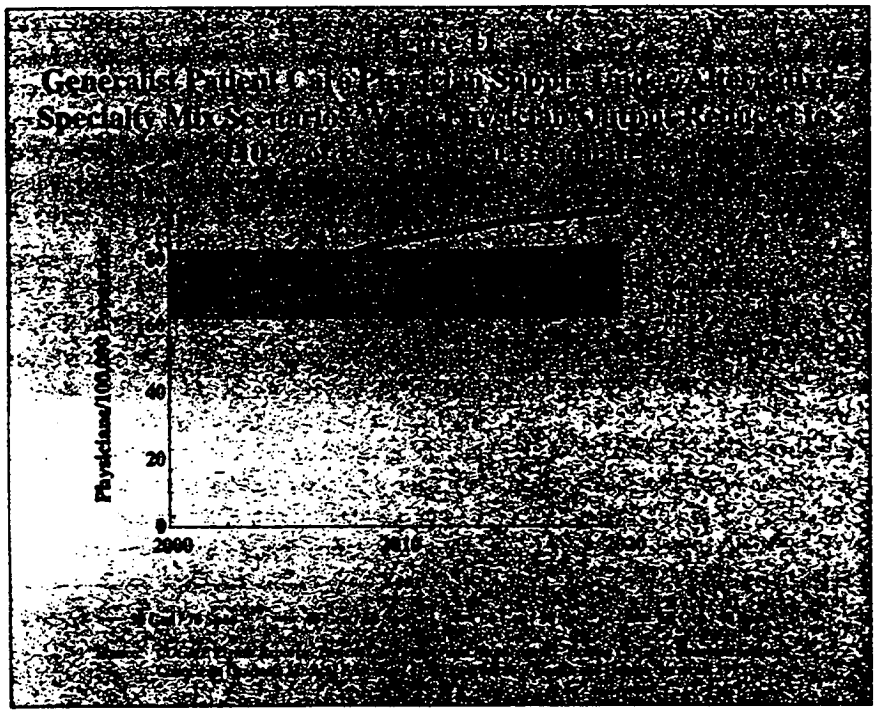
Figure 10 compares specialist patient care supply and requirements assuming the current number of residents in training as above. It illustrates the difficulty that specialists may face in the health care marketplace, even if the number of graduates who choose specialty careers declines from 70% to 40%. If over the next few decades the same numbers of residents begin training, specialist supply will substantially exceed requirements well into the 21st century.

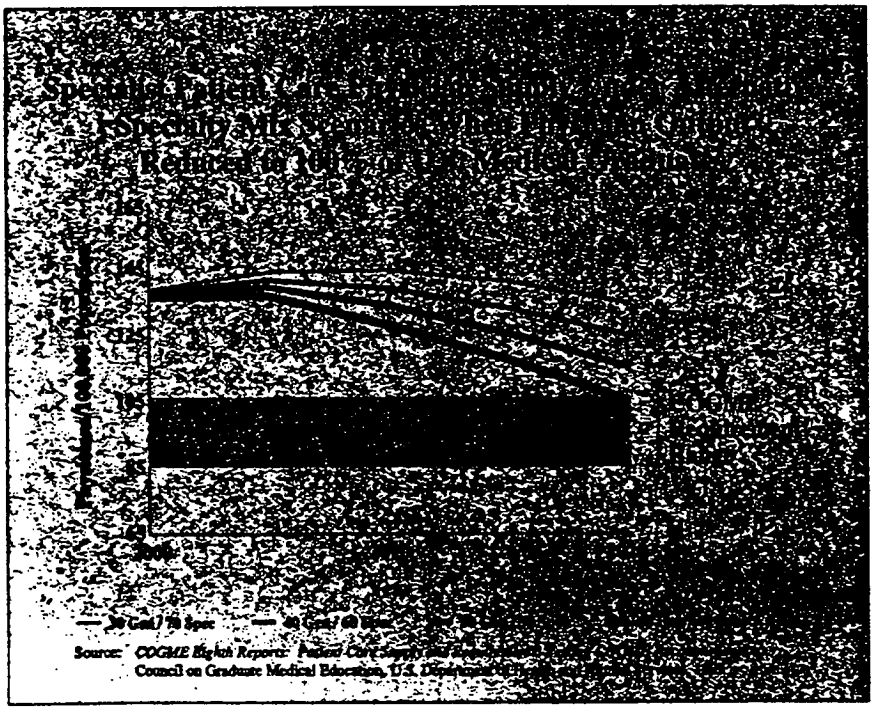
In previous reports, COGME has recommended that the number of first-year residency positions be reduced to from 140% to 110% of the number of U.S. medical school graduates (USMGs). Figures 11 and 12 present forecasts of various scenarios if the number of new physicians entering the workforce each year were 110% of USMGs.

Figure 11 compares generalist patient care supply and requirements. The data indicate that the supply of generalist physicians would remain within projected requirements ranges only if at least 40% of graduates chose generalist careers and would meet staffing requirements more rapidly if at least 50% of graduates became generalists. **Figure 12** shows that the surplus of specialist physicians would be significantly reduced if the number of residents beginning training is reduced to 110% of USMGs and at least 50% of residency graduates choose careers as generalist physicians.

While these projections consider a wide range of differing assumptions, two patterns clearly emerge. First, it appears that the supply of generalists is barely adequate to fulfill even the low range of requirements. Second, all projections portend a surplus of physician specialists. This surplus will continue to increase unless the total number of residency positions is reduced and the proportion of medical students entering generalist careers is increased dramatically from the current level of under 30 percent.

Limitations of Supply and Requirements Analyses: While there is variation in the numerical results of these three recent forecasts of the physician workforce, they all point in the direction of an oversupply of specialist physicians (AM News, Aug. 8, 1994:1). Each forecast considered, to varying degrees, the impact of managed care on the marketplace. The





reasoning and conclusions were correspondingly consistent in direction. More precise estimates of the impact of managed care on the oversupply will ultimately depend on a clearer understanding of the following four issues:

Requirements of different types of managed care organizations: Much is currently known about the staffing patterns of group and staff model HMOs, which have been the only source of data for use in forecasting requirements for physicians in managed care (Kindig, 1994; Mulhausen and McGee, 1989). It is not really clear whether the same assumptions can reasonably be applied to networks that use large multispecialty groups. Little has been reported about the staffing patterns of IPAs in which groups of physicians contract with more than one insurer while also participating in PPOs and FFS. This is particularly true of the rapidly growing, small group IPAs. Furthermore, requirements vary geographically and requirements differ for women and minority physicians.

It has been argued that physicians in solo or small group practices are more productive because they work more hours and see more patients than full-time physicians in staff and group model HMOs. Furthermore, IPAs offer greater staffing flexibility in that an insurer can expand coverage by adding practitioners to its panel of physicians without capital expenditures. If one accepts these assumptions, then fewer physicians will be needed to provide care to patients in IPA settings. Others argue that small practices lack the economies of scale of group and staff model HMOs and network models, and the rate of using non-physician providers is lower in IPA practices. If one accepts these assumptions, then IPAs require a higher ratio of physicians per unit of patient population.

These issues are even more complex when one considers the hybrid forms of managed care such as the point-of-service (POS) plans (also referred to as the open-ended option). Traditional staff and group model HMOs are innovating to meet new competition. Some are offering more open access to primary care by mandating that physicians be available a certain number of hours per week, including evenings and Saturdays. A critical question that will need to be answered in order to refine forecasts is the degree to which physicians' productivity varies in group and staff model HMOs as opposed to smaller group IPAs.

Out-of-Plan Use: A continuing question being raised is the degree to which some patients enrolled in closed panel staff and group HMOs seek additional medical care outside the managed care plan, either by paying out-of-pocket or by using the coverage of a second indemnity policy of a spouse. No formal estimates of this phenomenon are available (Weiner, 1993) and this has not been considered in forecasts. If this does occur to any significant extent, it leads to underestimates of the staffing patterns of staff and group HMOs. Similarly, there has been speculation (Weiner, 1993) that the staffing statistics of staff and group

model HMOs may not accurately reflect their requirements for highly specialized physicians. These include, for example, pediatric oncologists or pediatric ophthalmologists, who are needed infrequently even in large patient populations and whose services are negotiated by the HMO under separate contracts on a case-by-case basis. Furthermore, hospital-based specialists (e.g., anesthesiology, emergency medicine, radiology, pathology) whose fees are included in hospital per diem charges are not always reflected accurately, if at all, in the HMO staffing data that are being used in forecasting requirements.

Older and Sicker Populations: It has been widely believed that managed care, has tended to attract younger and healthier populations than FFS plans (Kindig, 1994). This has been true particularly when the patients have some degree of choice between managed care and indemnity coverage. However, it is now changing as more employers shift their employees into managed care. The precise impact of the recent shift of larger Medicare and Medicaid populations to managed care remains uncertain, but it appears that the age and health status of patients covered by managed care and indemnity insurance is becoming more similar. One recent study based on a sample of 98,940 nonelderly respondents to the 1992 Health Interview Study refuted the notion that chronic illness is more prevalent among person covered by indemnity insurance than by HMOs, even when health status and sociodemographic factors were controlled (Fama et al., 1995).

Changes in Patient (Consumer) Preferences: In certain markets there remains a strong consumer preference for unrestricted access to specialists. This in part has created the demand for point-of-service (POS), or open-ended, options, in which a patient who is willing to pay some portion of the fee, can choose to see any physician at any time, even those outside of the health plan's formal network. Although patients initially choose this option they do not always appreciate the out-of-pocket costs for their deductible and may not exercise their option frequently. Informed reports indicate that utilization is low. Nevertheless, enrollment in POS options continue to grow because these plans offer flexibility for some patients who are concerned about maintaining direct control over some of their health care decisions. Changes in patient preferences may have a variable impact on supply and requirements analyses.

IV. Impact of Managed Care on Medical Education

The growth of managed care is likely to affect medical education in two ways. First, medical schools and teaching hospitals will be forced to adapt to the changing health care environment, in order to survive financially. These changes will have both direct and indirect effects on the educational programs for medical students and resident physicians. Second, the content and process of medical education should be influenced by the needs and requirements of the changing health care system, including the managed care organizations where physicians will practice.

Impact on medical schools and teaching hospitals

Finding # 3: Changes in the health care environment that have led to the growth in managed care will also have major effects on the allopathic and osteopathic medical education system and their teaching institutions; this will likely result in decreased financial support for medical education at both the undergraduate and graduate levels, which could affect the quality of these endeavors.

As managed care penetration increases, it is likely that revenues from faculty practice and from teaching hospitals will decrease (Whitcomb et al., 1993), although this has occurred in only a few sites to date (Kassirer, 1994). Many medical schools are dependent on the income from clinical service for a large proportion of their revenues. For the academic year 1992-1993, an average of about 33 percent of revenue in MD-granting schools was derived from faculty practice. In that year, clinical service, defined as faculty practice, reimbursement from hospitals, and grants/contracts for services and multipurpose programs, made up almost one-half of total medical school revenues (Ganem et al., 1994). The percentage of total medical school revenues in MD-granting schools from clinical service has been rising steadily (29 percent in 1980-1981, 39 percent in 1987-1988, and 48 percent in 1992-1993), as has the absolute dollar amount of clinical revenue (Ganem et al., 1994; Jolly et al., 1990).

However, there are differences among MD-granting medical schools in the amount of practice-income generated. The differences appear to be related, in a large part, to the number of full-time clinical faculty members (Krakower et al., 1994). For DO-granting medical schools an average of 9 percent of medical school revenue was derived from faculty practice in 1992-1993 (AACOM, 1994). These data illustrate that decreases in the clinical service revenues of many medical schools will have implications for their overall financial status and, consequently, how well they are able to carry out their missions of education and research.

Many medical school-owned and other hospitals with teaching programs are vulnerable to the changing environment due to their lack of an adequate primary care faculty base, a surplus of specialty faculty and, in general, their higher patient care costs. As employers are attracted to the lower costs of managed care plans, more individuals are enrolling in these plans, which can restrict their access to providers and hospitals. Teaching hospitals and faculty practice groups must, therefore, compete for managed care contracts in order to maintain their patient base, negotiating rates of payment that may be below cost (Kassirer, 1994), or form their own managed care organizations.

In some environments, the effects of increases in managed care are exacerbated by other fiscal constraints. For example, New York City teaching hospitals are facing large reductions in Medicaid funding from the state, as well as a rapidly growing managed care market (NYT, Feb. 13, 1995). At the University of California - Davis, the Dean reported a large medical school operational deficit because of reduced support from the University and an imbalance between clinical revenues and expenditures, resulting from decreased referrals and declining reimbursement for each "unit of work" (Lazarus, 1995).

Decreased revenue from clinical service, due to the increasingly competitive health care environment, has the potential to affect the educational activities of teaching institutions. A percent of faculty practice revenue often is given to the medical school as a "dean's tax," which, in turn, can be used as discretionary funding to support education and research. For example, community-based ambulatory teaching is, in part, supported funded by these discretionary funds.

It is important to remember that graduate medical education (GME) is funded by clinical service revenues, a proportion of which come from the federal government. In 1991, 29 percent of the total direct costs of graduate medical education (GME)—which include the salaries and benefits of resident physicians, salaries paid to attending physicians for supervision and administration related to GME programs, and overhead allocated to GME programs—were funded by Medicare (GAO, 1994). Medicare direct GME payments amounted to an estimated $1.8 billion in 1995.

In addition, the Medicare indirect medical education (IME) adjustment totaled about $4.5 billion in that year. The direct and indirect medical education adjustments are paid to teaching hospitals based on formulas that take into account the number of resident physicians (Mullan et al., 1993).

It is clear that reductions in Medicare funding could affect GME programs. However, changes in the availability of funding from other payers that also contribute to GME can have deleterious effects. For example, losses in revenue experienced by the University of Tennessee Medical Center hospital when the state changed to a managed Medicaid program that did not explicitly pay for GME resulted in a decrease in the number of residency positions (HRSA contract 240-93-0040). TennCare instead encouraged the teaching hospitals to form new HMOs, to compete and to negotiate to recover their educational costs. Three of these hospitals developed HMOs, expanding primary care services in an attempt to attract enough capitation to minimize adverse selection and support their educational programs. However, the state set initial capitation rates at only about 65 percent of prior Medicaid fee-for-service costs, leaving little room for the teaching hospitals to negotiate educational cost. Furthermore, when TennCare was implemented fewer than 20 percent of the eligible patients in the service areas of the teaching hospitals chose to enroll in their HMOs, resulting in underutilization and adverse selection in these HMOs. The resulting impact on graduate medical education and disruption of the mission of teaching hospitals in Tennessee provides an example of the potential for unintended consequences after a rapid shift to managed care (Memorandum, from R. Robert Herrick to Robert L. Summitt, M.D., February 28, 1995). Finally, while governmental funding has been critical in supporting graduate medical education activities, private payers also have contributed, usually by implicitly or explicitly agreeing to pay the patient care higher costs associated with teaching institutions. This is now becoming less likely to be the case.

The ability of teaching hospitals to obtain managed care contracts may be hampered by their higher costs. For example, the average 1991 cost per adjusted patient day was $995 at hospitals that were members of the Association of American Medical Colleges Council of Teaching Hospitals (COTH), $778 at non-COTH teaching hospitals, and $628 at non-teaching hospitals (AAMC, 1993/G7). The higher costs of teaching hospitals are the result of several circumstances, including patients with more serious and complex clinical problems, the increased use of services due to learning needs of trainees (Cameron, 1985; Fox and Wasserman, 1993) and the expenses associated with the provision of uncompensated care.

Teaching hospitals, especially those that are part of academic medical centers, provide a relatively high percentage of uncompensated care. In 1991, uncompensated care was 9.6 percent of total revenue in the 120 hospitals that were classified as part of academic medical centers by the Association of American Medical Colleges, as compared to 5.1 percent in non-teaching hospitals (AAMC, 1994). Until there is universal coverage for health care, medical schools and their associated teaching hospitals overall may continue to play a major role in providing care to the uninsured and underinsured. This function has been supported by the availability of supplemental funding, such as the Medicare IME and disproportionate share payments, cost shifting from other payers, and by the availability of resident physicians and faculty members who provide service. Changes in funding levels or in the numbers of residents and faculty members may affect the ability to provide these services.

There are several general strategies that medical schools and teaching hospitals which have been affected by the changing environment can be and are taking, singly and in combination. There may be internal reorganizations such as the creation of systems designed to integrate the medical school, teaching hospital and faculty practice plan into an efficiently functioning system. This type of organization can become the central player in negotiating contracts with managed care plans (Iglehart, 1995). Some public academic medical centers have been allowed by their state legislatures to create new organizational entities that can function with fewer restrictions. Legislation created the private University of Maryland Medical System, including the University Hospital, the Shock Trauma Center and the University of Maryland Cancer Center. The new entity was designed to be able to respond quickly to an increasingly competitive health care marketplace (Schimpff and Rapoport, 1992). As another example, the Oregon Health Sciences University is attempting to separate from the state system of higher education and be reconstituted, through legislation, as a public corporation. This would remove the requirement that the University be subject to regulations, such as contracting and approval processes that apply only to state agencies.

Many institutions have chosen a variety of strategies. In Minneapolis, where about 43 percent of the population is enrolled in managed care organizations, the University of Minnesota Hospital experienced decreased admissions because the University was unwilling to negotiate discounted prices. Concerns about the financial viability of the hospital led to changes such as the formation of integrated service networks, and to the negotiation of contracts based on discounted rates (St Paul Pioneer Press, November 14,

1994). The UCLA Medical Center, also in an area with high managed care penetration, has worked to decrease costs by shortening length of stay and reducing personnel. The hospital and the physician practice plans have merged contracting functions, allowing inpatient and outpatient services to be packaged. The faculty practice plan is considering merging into a multispecialty group. Finally, UCLA is starting an IPA in the region around the medical school (AM News, August 8, 1994). Medical schools are also forming new patient care networks or joining existing networks (Iglehart, 1995). Still others are considering selling there flagship tertiary care teaching hospitals, an almost inconceivable proposition even two years ago. The goal is to increase competitiveness by allowing the University to respond more quickly to the changing health care marketplace (Iglehart, 1995).

The two previous examples highlight changes that some medical schools and teaching hospitals are making that could be considered contrary to the "culture" of academic medicine. Traditionally, academic medicine has placed a high value on departmental autonomy, a decentralized decision-making structure based on consensus, and a commitment to the primacy of education and research (Fox and Wasserman, 1993; Kassirer, 1994; Rogers et al., 1994). Also, the higher costs associated with the learning needs of trainees, such as increased use of diagnostic tests and procedures and longer lengths of stay, have been accepted as part of the normal operational expenses of teaching hospitals by faculty members and administrators (Fox and Wasserman, 1993). However, this philosophy may no longer be possible. A study by the RAND Corporation recommended the following steps should be taken to ensure the survival of academic medical centers: (1) develop a centralized, effective governance system; (2) create a spirit of entrepreneurship at all levels; (3) create incentives for faculty members to generate revenue; (4) develop a methodology to allocate resources in a strategic manner; and (5) display a willingness to pursue cost containment (Schimpff and Rapaport, 1992). The need to be more competitive and to control costs is now leading to more centralization of authority for the patient care function and to more stringent monitoring of physician and resident utilization patterns (Wartman, 1994), which lead to such things as a reduction in resource utilization (such as test ordering) strictly for educational purposes.

The movement of medical schools and teaching hospitals into the managed care arena has taken several forms. First, medical schools have started their own managed care organizations, an early example being the George Washington University Health Plan, a group model HMO. Initially started in a medical school department, the HMO director now reports to the Vice Chancellor for Health Affairs of George Washington University (HRSA contract 240-93-0040). In this model, the academic medical center and its "faculty" provide the full range of primary, secondary, and tertiary services. In contrast, Duke University Medical Center has made the decision that an academic medical center should focus on tertiary care. Duke has acquired the practices of a number of primary care physicians, who will work for a subsidiary of the medical center, and also is negotiating with an insurance company to develop an HMO as a joint venture (Rogers et al., 1994). Medical schools also may affiliate with existing managed care organizations. The University of Miami and the Public Health Trust/Jackson Memorial Hospital formed a strategic alliance with Physician Corporation of America (PCA), a large managed health care organization serving the Southeastern United States and based in Miami. Through this alliance, PCA provides management, marketing and primary care assistance to an academic medical center and its network of more than 900 physicians and associated hospitals serving millions of patients in South Florida, the Caribbean and Latin America (PCA, 1995). Similarly, the Ohio University College of Osteopathic Medicine is exploring a joint venture agreement with an HMO to establish a managed care system that will both provide improved access to care for the rural, underserved community in the area and serve as a training site for osteopathic students.

Data are limited on the degree to which medical schools are entering into managed care arrangements or what form these arrangements take. Mixed models are probably common, as in managed care organizations in general. For example, the George Washington University Health Plan has affiliated with an independent practice association to increase its patient base. The physicians in this affiliate may not be directly associated with the teaching program of the medical school. Starting a managed care organization is not without its dangers. A case study at one medical school illustrated that things such as faculty resistance arising from a specialty-focused organizational culture can negatively impact the ability to make the changes necessary to maintain a university-owned HMO (Bosch and Deuschle, 1993).

As medical schools form patient care networks and establish practice sites outside the academic medical center, they potentially come into competition with community physicians. This could exacerbate "town-gown" tensions, which is especially troublesome at a time when medical education is requiring an increased use of community-based sites for teaching.

In addition to institutional level associations between medical schools and managed care organizations, there are also departmental level affiliations. A 1990 survey of residency programs in family medicine, internal medicine and pediatrics by the GHAA showed

that 64 percent of their sample of family practice programs, 28 percent of pediatrics programs and 24 percent of internal medicine programs had contracts with managed care organizations to provide service to enrollees (Corrigan and Thompson, 1992). While these types of contracts probably have been beneficial financially, there is little information about how they impact the educational aspect of the residency programs.

One report about the effects of a major increase in enrollment of prepaid patients in a university-based family practice residency program (Curtis et al., 1988) described the tensions caused by an increased patient volume and a new emphasis on cost containment. There also is beginning to be anecdotal evidence that when managed care has entered some sites where residents are trained, resident involvement in some patient care activities has been limited. If this proves to be a consistent pattern, it can have major implications for resident education and program accreditation.

As medical schools form or associate with patient care networks, a number of issues arise related to the way that medical schools traditionally function. One is the effect that this expansion might have on the definition and role of "faculty." For example, are the new, often employed staff who became part of the medical school when it enters networks or acquires practices available for the teaching program? Do they take part in the governance structure of the medical school and are they subject to the same evaluation criteria as full time faculty members? How does the governance of the medical school interact with the management of the health care delivery enterprise? Is the traditional faculty-driven, committee-based decision-making structure that characterizes the academic program separate and distinct from the way that faculty practice is managed?

Also, how will patient care networks and networks for the education of medical students and residents co-exist if they are not contiguous? For example, will students and residents be able to rotate in educationally appropriate sites that may be members of a patient care network in competition with the medical school? These questions will have to be addressed as part of the planning for medical schools and teaching hospitals as they move into the managed care arena.

In summary, the net effect of increased competition may well be a decrease in clinical income for many teaching institutions, which has traditionally supported their medical educational components. Increased competition may also result in a decrease in the availability of other important educational resources, such as training sites, teachers, and patients. These necessary adjustments may be considered contrary to the traditional "culture" of academic medicine, which placed a high value on departmental autonomy and a decentralized decision-making structure. Nonetheless, teaching institutions that cannot adjust may see the quality of education at the undergraduate and the graduate level affected as well as their own survival threatened.

Impact On Student And Resident Education

Finding # 4: The growth of managed care will magnify the deficiencies of the current educational system, yet will also provide new and essential educational opportunities to improve the preparation of physicians for their future roles.

The growth of managed care will have both direct and indirect effects on the educational program for medical students and house staff. As a response to the needs of the changing health care environment, educational programs will have to produce a physician with a new set of skills and new areas of knowledge than previously. This will require shifts in the content of the educational program and also in the sites used for clinical training. In addition, educational programs will have to be delivered in the context of the changes that are occurring in medical schools and teaching hospitals as managed care increases, including potentially decreasing revenues and the formation of patient care networks.

Competencies for Primary Care and Managed care Practice

Generalist physicians in primary care practice require basic knowledge and skills that are applicable across practice settings. Rivo and colleagues (1994) developed a list of competencies related to common prevailing conditions and diagnoses that generalist physicians should be expected to manage. These included comprehensive preventive care; treatment of common acute, chronic and behavioral problems; and other areas such as cost effective care, medical ethics, patient education, and coordination of consultant care. In addition, additional knowledge and skills may be required based on a specific practice setting, for example, a managed care organization (Table 9).

The GHAA (in *Primary Care Physicians: Recommendations to Reform Medical Education. Competencies Needed to Practice in HMOs. 1994*, recently described the following competencies needed for generalist physicians to practice contemporary medicine to panels of patients in managed care settings. Appropriately trained generalist physicians will be able to:

- Foster health promotion and deliver disease prevention services
- Communicate effectively with patients and panels of patients

- Detect, diagnose and effectively manage common symptoms, and physical signs
- Manage common acute and chronic medical conditions, including musculoskeletal and mental health conditions, and perform ambulatory diagnostic procedures and simple surgery
- Understand and practice the principles of effective quality improvement
- Refer appropriately to other specialists for needed health care services and coordinate all aspects of care, including technology
- Detect, understand, and manage health risk problems of the home and work place
- Demonstrate leadership and team building skills, including resource allocation, for effective practice management in an organizational care system
- Use clinical and management information systems to analyze and improve practice and practice patterns
- Engage in participatory decision making with patients, families, and other providers
- Understand the health related needs of a defined population
- Apply a general knowledge of managed care systems in evaluating the relevant medical literature

What other content and skills have been suggested as needing addition and reinforcement in the medical curriculum to better prepare physicians for practice in a managed care environment? These include cost effective use of a wide range of diagnostic and treatment services (Jacobs and Mott, 1987; Moore, 1993; Wartman, 1994); utilization review/quality assurance (Jacobs and Mott, 1987); population-based clinical medicine, including epidemiology and biostatistics (GHAA, 1994; Greenlick, 1992); the application of quality improvement methods and principles to improve the health and healthcare of communities (Headrick et al., 1995) and health care system structure/health care financing (Jacobs and Mott, 1987; Moore, 1993).

In addition to knowledge of specific content and clinical skills, the new physician should possess certain characteristics relevant to practice in a managed care setting. A major skill is being a "team player," that is, being able to work in groups of physicians and use peers as mentors and consultants. A part of this is comfort with oversight by peers, especially as an informal part of everyday practice (HRSA contract 240-93-0040). Additional skills cited as important include the ability to work with other health professionals (Jacobs and Mott, 1987).

There have been calls for changes in the medical education program based on evidence that medical residents completing training today are not optimally prepared for some aspects of practice in the evolving health care delivery system. A 1991 survey of physicians under the age of 45 by the Robert Wood Johnson Foundation revealed that only 60 percent believed that they were well trained to provide preventive care, 41 percent believed that they were well trained to provide cost-effective care, and 32 percent that they were well trained to coordinate patient care with community services and resources. About one-third believed that they had spent too little time during training in hospital-based outpatient units, one-half that too little time was spent in long-term care facilities and two-thirds that they spent too little time in physician offices or organized managed care settings (Cantor et al., 1993). It is important to note that the physicians responding to this survey were not just practicing in managed care organizations. That is, medical education may not be adequately preparing new physicians for a variety of practice arrangements. Medical stu-

Table 9 Training Components Addressing Generalist Medical Skills

Care of the population
- Care of Newborns
- Care of infants
- Care of children
- Care of adolescents
- Care of adults
- Care of the elderly

Care of patients in multiple settings
- Ambulatory care
- Hospital care
- Home care
- Nursing home/hospice care

Comprehensive preventive care
- Epidemiology of illness
- Health promotion counseling (including injury prevention)
- Prenatal care
- Infant/child preventive care
- Adolescent preventive care
- Adult preventive care
- Nutrition counseling
- Family planning
- Genetic counseling
- Tobacco/drug counseling
- Screening for cervical cancer/Papanicolaou tests
- Screening for other cancers (eg, skin cancer)
- Prevention of heart disease
- Immunization services

Treatment of common acute illnesses
- Training in emergency medicine
- Musculoskeletal (eg, fibromyalgia, tendinitis)
- Gynecologic (eg, vaginitis)
- Urologic (eg, urinary tract infection)
- Ear, nose, and throat (eg, otitis media, sinusitis)
- Opthalmologic (eg, corneal abrasion, conjunctivitis)
- Dermatologic (eg, scabies, pediculosis)
- Infectious (eg, cellulitis, pneumonia)

Ongoing treatment of common chronic conditions
- Cardiovascular (eg, angina, hypertension, stroke)
- Endocrine (eg, diabetes, thyroid disease)
- Rheumatoid arthritis/osteoarthritis
- Pulmonary (eg, asthma, bronchitis, emphysema)
- Skin (eg, acne, dermatisis)
- Gastrointestinal (eg, ulcer, irritable bowel)
- Genitourinary (eg, urinary incontinence)

Ongoing treatment of common behavioral problems
- Depression
- Anxiety disorders
- Other problems (eg, stress, grief reaction)
- Substance abuse
- Patient counseling skills

Other training for generalist practice
- Community/public health
- Use of community resources
- continuity care with assigned patients
- Coordination of consultant care
- Comprehensive assessment
- Patient education
- Evaluation of undifferentiated problems
- Evaluation of occupational/school health-related illnesses
- Interdisciplinary training
- Cost-effective care
- Medical ethics
- Death and dying counseling
- Medical informatics/computer training
- Critical medical literature appraisal
- Practice management (eg, managed care)
- Risk management

Source: Rivo et al., JAMA, May 18, 1994, Vol. 271, No. 19

dents report that they are not adequately prepared in key competencies required by the emerging health delivery systems. In response to a 1991 survey conducted by the AAMC, 49 percent of seniors cited inadequate instruction time in public/community health, 55 percent in preventive care, 57 percent in information/literature analysis, 64 percent in cost-effective practice, and 73 percent in practice management/managed care (COGME Fourth Report).

Furthermore, a recent survey of administrators and staff in managed care organizations revealed the perception that the educational preparation of new physicians was not optimal. Three-fourths of respondents to the survey, which was conducted by the GHAA under contract to HRSA, reported that newly-hired general internists and obstetrician/gynecologists were poorly prepared for managed care practice, 60 percent believed that pediatricians were poorly prepared and 50 percent believed that family physicians were poorly prepared (Palsbo and Sullivan, 1993). One HMO reported that it takes about 12 months for a newly-hired physician to understand and practice cost-effective managed care (Larsen et al., 1993).

Curriculum for Managed Care Practice

How, where, and when should content and skills relevant to practice in managed care setting ideally be incorporated into the curriculum? It is important here to think of medical school and residency training as a continuum, where core knowledge and skills are both introduced and reinforced. Curriculum planning should consider what knowledge/skills relevant to practice in a managed care setting should be required for all physicians and which are specialty-specific. It is also critical to consider who will teach the new content and skills. Are such individuals currently represented among the faculty in medical schools and residency programs or must medical education seek other sources of faculty and sites for training? The need to expand the content and skills in the medical school and residency curriculum presents opportunities to reach out to teachers beyond the academic medical center. Some skills, such as comfort with teamwork and with oversight, might better be taught by role modeling in a compatible environment than by didactic presentations. Managed care organizations themselves could provide appropriate settings to teach this type of content to medical students and residents. An example of this is the establishment of the Managed Care Institute at Michigan State University in partnership with the Blue Cross Network - Health Central, in which the College of Osteopathic Medicine and Human Medicine will use an interdisciplinary approach to study and teach about managed care.

The answer to the question of who will teach is complicated by the need for faculty members to be more productive in patient care, and also by potential changes in the number, specialty mix and location of faculty. For example, if primary care delivery sites are increasingly located outside the academic medical center, this could affect the availability of these faculty to teach in "on-campus" clinical experiences. This is another reason for medical schools to consider community sites for clinical training.

As a way to address gaps in training, some managed care organization and other integrated health care systems have introduced specific educational programs for new staff. For example, the Metro Medical Group/Henry Ford Health System has started a Managed Care College, and Harvard Community Health Plan piloted a primary care orientation program for their adult generalist physicians. These activities have costs associated with them, such as lost patient care time. FHP, Inc. estimated a cost of $5000 for each new primary care physician to participate in several workshops (Larsen et al., 1993). In 1994, furthermore, the Institute of Health Care Improvement (IHI) established the IHI Inter Disciplinary Professional Education Collaborative, a three-year commitment to design, implement , and evaluate inter-disciplinary educational experiences in which professionals-in-training will learn together about the continuous improvement of health care (IHI, 1994).

Changes in the Sites Used for Training

The need to move more of clinical education out of the inpatient hospital setting has been cited by many (e.g., Schroeder, 1988), for reasons broader than just the need to prepare physicians for practice in managed care. However, the new environment of medical practice associated with the growth of managed care makes this even more important. Decreasing numbers of patients are being hospitalized, and those in the hospital have shortened lengths of stay and are more seriously ill. This is a stimulus to the increased use of the ambulatory care setting. In addition, the networks that are being set up for patient care can provide useful sites for clinical training, if appropriate arrangements can be made.

There have been calls to use managed care organizations as sites for training both because they fulfill the general need for ambulatory care teaching sites and also because they possess special characteristics, such as providing care to defined populations, emphasizing prevention and cost effective delivery of care, and practicing utilization review. The degree to which managed care organizations are used for medical student and resident teaching is not fully known. This is, in part, due to the difficulty of determining how much teaching occurs in physician practices that are dispersed parts of independent practice associations. It is

likely, however, that medical students who participate in patient care experiences in private physician offices or in group practices are exposed to some proportion of managed care patients, especially in areas of high managed care penetration. Whether these students experience any of the special characteristics of education in more centralized managed care organizations, such as group or staff model HMOs, is not known.

Extent of Training in MCOs

Medical student experiences in group and staff model HMOs are still relatively scarce. A 1994 survey of all 125 U.S. MD-granting medical schools (with a 99 percent response rate) conducted by the Liaison Committee on Medical Education revealed that in 17 schools all students had an experience in an HMO and in 58 schools, some students had such experiences. The types of required experiences included physical diagnosis/clinical skills/introduction to medicine courses, clinical clerkships, and senior selectives (LCME, 1994). These experiences were not limited to the outpatient setting. For example, clinical clerkships included inpatient rotation in HMO hospitals.

The amount of residency education that is occurring in managed care settings also is difficult to quantify because there are a number of arrangements that can occur. For example, managed care organizations can sponsor their own residency training programs. The Kaiser Permanente Medical Centers in Northern California sponsor programs in internal medicine, pediatrics, ENT, obstetrics-gynecology, and pathology. Residency programs may affiliate with MCOs, using them as rotation sites. A medical school also may rotate residents through sites that provide care to patients subscribing to its own HMO. Finally, a multispecialty group practice may sponsor residency programs where trainees see patients from an affiliated or owned HMO (HRSA contract 240-93-0040). There currently are no comprehensive data on the number of residency programs or residents that have educational experiences in MCOs. A 1990 survey by the GHAA that was sent to 481 U.S. HMOs that had been in operation for at least four years had a 58 percent response rate. Of these, 42 (15 percent of respondents) HMOs reported that they were involved in graduate medical education, mostly through an affiliation with a medical school or teaching hospital to serve as a site for an ambulatory rotation. Larger staff and group model HMOs, not for profit plans, and HMOs owned or sponsored by an academic health center were more likely to be involved in the education of residents (Corrigan and Thompson, 1991).

HMOs may be involved in both medical student and resident teaching. For example, the George Washington University School of Medicine has a required ambulatory care clerkship that is taught by full time faculty members associated with the George Washington University Health Plan (a group model HMO), and school of medicine residents rotate through clinics that serve the MCOs enrollees. The Kaiser Foundation Health Plan of Northern California is affiliated with three medical schools and often teaches medical students in required clerkships and in physical diagnosis courses. There are also HMO and affiliated residency programs. An independent family medicine residency program also exists at the Group Health Cooperative of Puget Sound, which is affiliated with the University of Washington for medical student teaching (HRSA contract 240-93-0040). An example of a close organizational linkage between an HMO and a medical school is the formation of an academic department of Ambulatory Care and Prevention within the Harvard Community Health Plan. This resulted in the creation of a "teaching HMO," where students and resident physicians at Harvard Medical School could have experiences in a managed care setting (Moore et al., 1994)

As a way to prepare physicians for managed care practice; fellowships in managed care have begun to be collaboratively developed by managed care organizations and medical schools. US Healthcare has funded fellowships for physicians in conjunction with Thomas Jefferson University and Hahnemann University. GNIS, Inc. and the University of Pennsylvania have announced a fellowship that includes content in health care systems, health services research, epidemiology, biostatistics, and health policy. GNIS, Inc. is involved in the development of decision-support systems.

The specific content of all these educational programs conducted at MCOs, and how well they exploit the unique characteristics of the HMO, is not uniformly known. In some cases, the MCO is perceived as a valuable ambulatory or inpatient teaching site because of its large patient base, not because of its unique characteristics. In some educational experiences in MCOs, medical students and residents tend to learn such things as the cost effective delivery of health care in the context of their patient care experiences, rather than through formal didactic sessions (HRSA contract 240-93-0040). More information is needed about what students and residents actually learn from experiences in MCOs, and whether such experiences produce a better product. In general, individuals who receive their residency training in an MCO and remain to practice are considered to be better prepared than physicians without MCO experience (HRSA contract 240-93-0040).

In addition to affiliations for the purpose of educating students and resident physicians, there also is the possibility of relationships between MCOs and

medical schools for research. The patient data from large MCOs can be valuable for outcomes and health services research. This type of collaboration can increase the availability of research opportunities for primary care physicians, residents and medical students. However, funding for such activities also is jeopardized in the current fiscal environment.

While there are many benefits potentially associated with utilizing community sites such as managed care organizations for medical education, there are some cautions that must be addressed as well. The educational program must retain responsibility for ensuring the quality of educational experiences, and the various sites used for teaching must be willing to participate in evaluation to ensure that quality is maintained. There also must be formal mechanisms set up to facilitate communication between the parent program and the teaching sites to ensure that educational objectives are understood and are being met. Strategies to accomplish these goals include the presence of formal affiliation agreements and the identification of specific individuals at the sites and at the parent program with responsibility for coordination (HRSA contract 240-93-0040).

V. Barriers and Public Funding Opportunities For Educational Change

Finding # 5: There are currently many barriers and few incentives by which health care and teaching institutions can address these problems regarding the physician workforce and medical education.

Barriers

The previous section described how more academic medical centers have been developing linkages with managed care systems both to improve their educational programs and to survive and prosper in the new marketplace. The degree to which this is occurring, however, varies due to a number of factors, including location, institutional goals, and history. While the predicted effects of managed care, such as decreased faculty practice revenues, have not yet generally occurred, they are expected and many schools are planning for these contingencies. Major efforts include attempting to secure a patient base through networking.

In parallel, there is a recognized need to move more of clinical education into ambulatory care settings in the community. This depends upon gaining access to patient care sites which may themselves be under competitive pressure to increase efficiency and cut costs. Managed care organizations are one teaching site whose potential has not been fully developed. These settings, especially group and staff model HMOs, can serve as both generic ambulatory care sites and also provide some specific experiences that can better prepare trainees for their future practice.

MCOs have some incentives to participate in teaching, including recruitment goals, maintaining the interest and enthusiasm of existing staff, and a sense of community responsibility (HRSA contract 240-93-0040). Kirz and Larsen (1986), in a study conducted at the Group Health Cooperative of Puget Sound, determined that the presence of medical students increased interest in practice in three-quarters of staff who participated in teaching and contributed to the professional education of most teaching staff.

However, a number of barriers exist to changing how and where future physicians are educated. Some of these barriers arise from sources external to the medical school, and others are internal. Many are a function of the differing goals and objectives between teaching programs and delivery sites (Moore, 1990). Most financial incentives currently are acting against the expansion of medical education programs into managed care organizations or other community sites.

A major related factor that has been cited as a barrier to education in ambulatory settings is the cost in terms of decreased productivity of physicians who serve as supervisors to students and residents. This is especially important as competition among health care delivery sites increases, requiring enhanced efficiency in providing patient care. There are data from the ambulatory care setting that indicate that more junior residents are associated with lower productivity and higher resource costs while more senior residents enhance the productivity of a practice (Lave, 1989). In one study, the presence of medical students cost about $21,000 in lost revenues for a full time equivalent physicians per full time equivalent medical student in an ambulatory clinic (Garg et al., 1991).

For HMOs, there are little recent data on the costs in lost productivity associated with the presence of trainees. The 1986 study of Kirz and Larsen at Group Health Cooperative of Puget Sound calculated a cost of $16,900 per full time medical student per year. This included students participating in a number of clinical clerkships. Two large group model HMOs reported that the presence of medical students in clerkships decreased physician productivity 25 - 33 percent (HRSA contract 240-93-0040). The basic issues are whether, how and by whom any loss in productivity will be compensated. While faculty supervising residents receive partial or full compensation for the time that they spend supervising residents (Corrigan and Thompson, 1991) medical student teaching often is undertaken on the physician's own time, by scheduling vacation or other uncompensated time (HRSA contract 240-93-0040).

There are few funding mechanisms in settings external to the medical school or teaching hospital, such as family practice centers, community health centers, and managed care settings, to support ambulatory care education for medical students and residents. These types of experiences have often been funded through clinical revenues generated by medical school faculty members, at the school or department levels. If clinical practice income decreases, these experiences could be jeopardized. This is now more critical since community sites are also feeling the competitive pressures to enhance efficiency and to decrease costs. Physicians who were willing to donate time to teach medical students and/or residents are now having to consider how teaching could affect their productivity. This could lead to the need to reimburse physicians who used to donate their time as "volunteer" faculty. A stable source of funding for ambulatory teaching is needed, to encourage this type of experience.

Public Funding Opportunities

The previous findings demonstrate that physicians need to be trained in different numbers, specialties and competencies to function effectively in managed care systems and to meet health care needs of medicare beneficiaries and the public. A substantial amount of public funds, through both Medicare and the Public Health Service, provide direct and indirect support for physician education. In targeting federal funding for medical education, COGME suggests that the nation should attain the following goals:

1. Decrease the number of specialists trained.
2. Modestly increase the number of generalist physicians trained and improve the quality of primary care teaching.
3. Increase minority representation in medicine.
4. Improve physician geographic distribution.
5. Train more physicians in ambulatory and managed care settings.

In considering recommendations to Congress and the DHHS Secretary to invest public funds prudently to produce the needed physician workforce, COGME identified the following principles:

1. Target medical education funding to physician workforce needs.
2. Provide options for budgetary savings that promote physician workforce goals.
3. Simplify and consolidate DHHS medical education financing and minimize regulation and micromanagement.
4. Provide incentives to expand education in primary care, ambulatory, and managed care settings.
5. Assist academic medical centers and teaching hospitals during the difficult transition.

Based upon these goals and principles, COGME summarizes below the relevant DHHS authorities within HCFA and PHS which influence the preparation of physicians. A more complete description of these authorities are contained in COGME's *Seventh Report.*

Medicare GME Policy

Medicare payments to hospitals have, since its inception, included payments for GME. These payments were made under cost reimbursement through 1983, and then, with the establishment of the Prospective Payment System, as discrete payments for "direct" and "indirect" costs of GME (see below). Equivalent kinds of payments have implicitly have been made by other payers, including private insurance and Medicaid.

Although Medicare payments have been critical to the financing of hospital-sponsored GME, its payment mechanism has not kept pace with the increasing advent and spread of ambulatory training other than that carried out directly by hospitals. These funds provide an opportunity to better encourage the training of physicians with the requisite skills for managed care practice. The following section reviews current Medicare law and its impact on the physician workforce as background to providing recommendations for government action.

Under current law, Medicare pays hospitals for GME through two different mechanisms.

Direct GME Costs: Under section 1886(h), Medicare payment for the costs of approved medical residency training programs in medicine, osteopathy, and podiatry are based on a hospital-specific per resident amount (PRA). The PRA is based on a hospital's allowable costs incurred in a base period and updated by changes in the Consumer Price Index-Urban. OBRA 1993 eliminated the inflation update during FY 1994 and 1995 for other than primary care residents and residents in OB-Gyn programs. Section 1886(h)(4)(E) limits GME payments in outpatient settings to instances where the hospital bears the costs of that training program. Residents that are beyond the initial residency period are counted as 0.5 FTE.

Indirect Medical Education (IME) Adjustment: An explicit payment for increased hospital operating costs in institutions with graduate medical education is made as an add-on to the prospective payment rate for inpatient hospital services to cover additional operating costs. Payments increase by approximately 7.7 percent for each 0.1 increase in the ratio of interns and residents per bed. However, this is higher than the analytic estimates of the actual effect of teaching on inpatient costs per case. All residents working in the acute care hospital (including the outpatient department and some hospital-sponsored ambulatory sites are counted. Time spent outside the acute care hospital, such as in managed care settings and community health centers, are not counted.

Risk Contract Payments: Medicare's payment to HMOs is based on the Adjusted Average Per Capita Cost (AAPCC) for Medicare beneficiaries in the fee-for-service sector. The AAPCC includes the additional payments made for both indirect and direct graduate medical education under the Medicare prospective payment system for non-HMO beneficiaries in the geographic region. The HMOs negotiate the prices paid to hospitals for services furnished their enrollees.

Medicare Payments for GME

Table 10 provides estimated Medicare direct and

Table 10 Medicare Direct and Indirect GME Payments 1990-1995 (millions, estimated)

Type of Payment	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995
Direct GME	$1,333	$1,420	$1,555	$1,669	$1,768	$1,837
Indirect GME	2,939	3,208	3,582	3,775	4,123	4,537
TOTAL GME	4,272	4,628	5,137	5,444	5,891	6,374

Source: Estimates by the Health Care Financing Administration as of January 1995.

indirect graduate medical education expenditures for 1990-1995:

Medicare GME payment amounts in the above table do not include the amounts implicit in the AAPCC payments to risk-based HMOs, which have been estimated at about $400 million for FY 1995.[1]

Consequences of Medicare GME Policy: There are a number of unintended consequences with current Medicare GME policy. Although consensus is widespread that our nation faces a growing physician surplus, Medicare pays hospitals an average of $70,000 per resident per year for any US or foreign-trained resident they are able to recruit whether or not that resident will be needed in the health care marketplace upon completion of training. Although consensus is widespread that the nation faces a growing budget deficit, current Medicare GME policy provides significant incentives for teaching institutions to increase the supply of residents in training and thus increase Medicare GME outlays. Although consensus is widespread that new physicians should be trained in ambulatory, community and managed care settings to better care for Medicare beneficiaries and the public, both DME and IME payments are based on the number of residents in hospital-based settings. As a result, there is a powerful disincentive to train residents in these essential non-hospital settings. In addition, current AAPCC policy provides disincentives for training in managed care settings.

A major deterrent to training residents outside the hospital is the funding structure for graduate medical education (GME) through Medicare. The direct Medicare GME payments are limited to outpatient settings where the hospital sponsoring the GME program incurs the costs. Similarly, the Medicare indirect medical education adjustment does not include time spent outside the acute care hospital. Therefore, while ambulatory care education in sites within the medical school/academic medical center is supported by current financing mechanisms, utilization of unconnected community sites is not.

In addition, the Medicare HMO capitation rate is not consistent with encouraging participation of managed care organizations in teaching. In certain geographic areas the projected FFS cost and thus the resulting capitation rates paid to Medicare HMOs also included the direct and indirect costs of graduate medical education. Unfortunately, there was no contractual obligation that the HMOs use the funds for this purpose. Furthermore, there is often considerable variation in the Capitation rates in adjacent geographic areas. On the other hand, managed care organizations that are Medicare risk contractors and that wish to develop accredited residency training programs do not receive additional explicit Medicare payments for this purpose. This policy creates a significant disincentive to encourage teaching in managed care settings. A plan for financing Medicare HMOs that considers the mix of patients and that uncouples medical education financing from the capitation rate has yet to be developed.

Targeting Medicare Funding to Meet Physician Workforce Goals: Today, Congress is considering options to reduce Medicare GME payments. The Prospective Payment Assessment Commission (ProPAC) has recommended reduction of the Medicare Indirect Medical Education (IME) adjustment by approximately $500 million in FY 1996 by reducing the IME factor from 7.7 percent per 0.1 intern/resident per bed (IRB) to 6.6 percent. ProPAC further recommended that the percentage ultimately be reduced to its analytically justified level of 4.4 percent, which at today's expenditure levels would generate approximately a $1.5 billion reduction in IME in FY 1996.[2] The Congressional Budget Office's analysis of Medicare's IME payments discussed rates of six and three percent, which would save $930 million and $2.6 billion, respectively, in FY 1996.[3]

COGME recognizes the need to analyze government programs to ensure that program objectives are being met cost-effectively. COGME also recognizes that Congress is considering reductions in Medicare programs to ensure its long-term solvency. In Medicare, it is possible to achieve Medicare savings by simply reducing Medicare expenditures for GME without giving attention to needs for workforce policy changes. However, it is also possible to reduce Medicare expenditures while achieving policy goals.

1 Statement by Ms. Barbara Wynn, Health Care Financing Administration, at the COGME meeting of April 27, 1995.

2 Estimate of $500 million reduction per percentage-point decrease provided by Dr. Stuart Altman, Chairperson, ProPAC, in testimony before the Committee on Ways and Means Health Subcommittee, March 23, 1995.

3 Congressional Budget Office: Reducing the Deficit: Spending and Revenue Options. Report to the Senate and House Committees on the Budget. CBO, February 1995.

This would be a preferable approach, since COGME believes that current Medicare incentives are operating counter to critical public needs for a better prepared physician workforce.

COGME believes that Medicare should limit both direct and indirect GME in ways that encourage a reduction in the numbers of physicians entering the workforce in the future. Support should be guaranteed to each graduate of a US medical school, but should gradually be reduced for graduates of foreign schools. There are three reasons for this policy. First, the rapid growth in the physician supply in recent years is primarily due to increased numbers of international medical graduates (IMGs), while the output of U.S. schools has been relatively constant. Second, projections of physician need in the United States suggest that there will not be work for these additional physicians. Third, expenditure of U.S. tax dollars to train non-U.S. citizens who will not be needed in this country is a poor use of limited Medicare dollars (Medicare IME and DME payments average $70,000 per resident each year).

COGME recognizes that IMG residents are not distributed equally across states or types of training programs, and that national goals achieved through Recommendation 1 could threaten service provision in certain areas and institutions. COGME is particularly concerned about large public hospitals and academic centers in metropolitan areas. We recommend that a transition strategy be developed for these institutions. One component could be an expanded National Health Service Corps loan repayment program to provide physician replacements for the IMG residents eliminated in selected institutions. Another could involve start-up funds to train physician assistants and nurse practitioners specifically as resident replacements in highly impacted areas. Another possibility, designed for the substantial number of institutions with small numbers of primarily IMG residents, is to award transition support for institutions who agree to cease residency training entirely.

Medicare GME policy provides significant disincentives towards primary, ambulatory and managed care education and produce incentives to train physicians in the appropriate specialties and settings to meet Medicare beneficiary and public needs. Despite the acknowledged need to train fewer numbers of specialist physicians and to move training out of the hospital, a recent GAO study estimated that 75% of Medicare GME payments go to specialty training. The rapid growth and popularity in managed health care and Congressional interest in increasing Medicare and Medicaid managed care enrollment makes it essential that more generalist physicians be trained in community-based, managed care settings. Upweighting of both DME and IME is important because the significantly larger payments made under IME will provide greater incentives to change the specialty mix. This payment policy can initially be implemented in a budget neutral fashion.

Downweighting IME payments to 50% for residents beyond the lesser of five years or the time required for initial board certification would provide an important disincentive toward specialty or subspecialty training. Furthermore, it would generate significant budgetary savings. The final recommendation is to ensure that the IME adjustment formula not inadvertently increase as a result of the continued market-driven trend towards hospital downsizing.

Medicare payment policy for risk HMO contractors is carried out through the AAPCC mechanism. AAPCC payments include an estimated $400 million that is based on DME and IME payments, but which are not identified in the AAPCC and which vary according to geographic region. As a result, Medicare GME funds are spread among all risk HMO contractors without being focused on those which actually have teaching programs, or necessarily utilize teaching hospitals for services.

These amounts should removed from the AAPCC and made available for GME in a wide variety of teaching settings, including teaching hospitals, managed care organizations with teaching programs, etc. This would help rectify a possible inequity to teaching hospitals that provide care to Medicare beneficiaries enrolled in risk contract HMOs but currently do not receive Medicare GME on their behalf. It would also eliminate the current disincentives to HMOs who wish to establish or expand residency training activities but do not currently receive explicit reimbursement for their efforts.

As health care increasingly becomes dominated by integrated managed health care systems, graduate training opportunities will change dramatically. COGME believes that both the accrediting bodies and HCFA should encourage the development of arrangements that will undoubtedly provide more diverse and necessary training experiences than currently exist. COGME has previously encouraged the development of medical education consortia or training networks to determine the number and specialty mix of residents, to facilitate the more appropriate utilization of training settings, and to receive and distribute GME funds to whoever bears the training costs, and in a manner that simplifies administration and maximizes flexibility in accomplishing physician workforce goals. Demonstration projects could be utilized to develop such a consortium approach to residency training and GME management.

Physician Education Programs in the Public Health Service

Although spending for medical education by HCFA and PHS differs by orders of magnitude, certain PHS programs (the National Health Service Corps (NHSC) under Title III and Health Professions Education under Title VII) have had a significant impact on the physician workforce. For example, targeted Title VII funding have contributed to a 25% growth since 1980 in the number of Departments of Family Medicine and a 40% growth since 1990 in the number of required student clerkships in family medicine. Building such family medicine teaching capacity has been cited by the GAO to be associated with increased student selection of generalist physician careers.[4] Targeted Title VII funding has contributed to a 200% increased in underrepresented minority enrollment in health professions schools. Today, 3.8 million people who would otherwise lack access are receiving quality primary care from 1,900 NHSC professionals.

A significant number of PHS programs provide institutional and individual incentives to attain COGME's national physician workforce goals. Title VII and the NHSC are perhaps the best known PHS programs that support the following COGME goals to enhance:

- generalist physician training
- minority recruitment
- geographic distribution
- primary care faculty development
- quality of practice

Current law: Title VII of the Public Health Service Act contains 40 authorities or program cycles supporting health professions capacity development. Overall, Title VII provides an estimated $207 million in primary care medical education, multidisciplinary training, minority/disadvantaged training, and student assistance related funding (Table 11). Each of these programs has its own special eligibility and project requirements. Within Title VII, 25 different authorities address aspects of COGME's physician workforce goals. Title VII programs are implemented by the Bureau of Health Professions, of the Health Resources and Services Administration (HRSA).

Another HRSA program, the NHSC, supplies primary health care providers for health professions shortage areas. Through service-obligated and volunteer programs, the NHSC recruits, trains, and places primary care providers in Community and Migrant Health Centers, health care to the homeless programs, federally qualified health centers, health departments, and free-standing private practices that are tied into a health care system. In 1995, the NHSC has a budget of $45 million and a "field" strength of 1,987 health care practitioners. Eighty million dollars were appropriated in 1995 for scholarships and loans which provide incentives for physicians to practice in underserved inner city and rural areas.

Primary care research funding is supported in the Agency for Health Care Policy and Research (AHCPR). In 1995, AHCPR's budget was approximately $157 million. Major budget areas include: (1) research on health care costs, quality and access, (2) the National Medical Expenditure Survey (NMES 3), and (3) medical treatment effectiveness studies. Two percent of the NIH's National Research Service Award's (NRSA) funding is administered by HRSA (1%) and AHCPR (1%) to train primary care researchers.

Targeting PHS Funding to Meet Physician Workforce Goals: Under the Public Health Service Act, Title VII programs, the National Health Service Corps, and primary care research support through the National Research Service Awards (NRSAs) and

Table 11 Physician Education/Primary Care Research Appropriations History (Selected Title III, VII & IX PHS Programs)

Program	Appropriations History (in millions) FY 1993	FY 1994	FY 1995
Primary Care Programs			
Family Medicine Departments & Training	$38.2	$47.2	$47.2
General Internal Medicine/Pediatrics	16.8	16.8	16.7
Physician Assistant Training	4.9	6.6	6.6
Multidisciplinary Training Programs			
Area Health Education Centers	19.8	22.2	24.6
Geriatric Education Centers	10.0	9.2	9.1
Health Education and Training Centers	2.8	2.8	3.7
Rural Health Interdisciplinary Training	4.0	4.0	4.0
Minority/Disadvantaged Health Professions Programs			
Centers of Excellence	23.5	23.5	23.5
Health Careers Opportunity Program	25.0	25.0	26.3
Loans Repayment/Fellowships - Faculty	1.1	1.1	1.0
Student Assistance Programs			
Exceptional Financial Need Scholarships	10.4	10.4	11.1
Financial Assistance for Disadvantaged HP Students	6.2	6.2	6.6
Loans for Disadvantaged Students	7.9	7.9	8.5
Scholarships for Disadvantaged Students	17.1	17.1	18.3
National Research Service Awards			
Bureau of Health Professions	2.6[1]	3.7[1]	3.8[1]
National Health Service Corps Field Program	42.0	44.7	45.0
National Health Service Corps Recruitment Program	73.4	79.3	80.1
Agency for Health Care Policy & Research	122.3	48.6	56.8
TOTAL PHS (Selected Programs)	**$428.0**	**$476.3**	**$492.9**

[1] Title VII PHS Programs
FY 93 & 94 represents actual disbursements. FY 95 represents estimated disbursement

4 General Accounting Office: Medical Education: Curriculum and Financing Strategies Need to Encourage Primary Care Training. GAO, Report HEHS-95-9, Washington, D.C., 1994.

AHCPR have been critical in achieving COGME's goals of increasing generalist physicians and physician assistants, improving primary care teaching capacity, increasing minority representation, and reducing geographic maldistribution.

Consolidation of Title VII programs is needed for simplification and flexibility of program administration. It will assist in focusing scarce Federal resources on activities that have a demonstrable impact on the production of primary medical care providers and public health workers. Demand is high for generalist physicians and major shortages continue in rural communities and in underserved rural and urban shortage areas.

Specific national goals for Title VII programs, common outcome measures and reporting requirements are essential to the effectiveness and success of these programs in attaining workforce goals. This strategy focuses Federal support upon training activities of known effectiveness in producing needed health care workers and in improving geographic distribution and minority representation.

VI. Recommendations:

With the rapid changes taking place in the health care environment, medical schools, residency programs, teaching hospitals and managed care organizations are encouraged to collaborate and cooperate to produce physicians with in the requisite numbers, specialty mix and competencies to meet patient needs. In addition, public funds for medical education through Medicare and the Public Health Service must be targeted prudently to provide the right incentives in the medical education marketplace (a more complete description of COGME's legislative recommendations are contained in COGME's Seventh Report to Congress and the Secretary).

Medical Schools, Residency Programs, and Teaching Facilities:

1. As medical schools, residency programs and teaching facilities restructure in order to be more competitive in patient care and at the same time preserve their academic mission, they will also need to reassess their roles and responsibilities regarding the physician workforce and medical education.

2. Medical schools, residency programs and teaching facilities should share in the responsibility to train the number and types of physicians appropriate to the nation's needs.

3. Medical schools, residency programs and teaching facilities need to evaluate their institutions and identify deficiencies that are barriers to achieving a more balanced physician workforce, and to train physicians for their future roles. These institutions should:

   a. assure that the process selects applicants who are motivated, have the qualities and abilities, and who can be educated and trained to become the physician workforce which the nation needs;

   b. assure that the curriculum educates students for their future role, including the "new basic sciences" of population-based medicine, epidemiology, and decision analysis; and

   c. assure that the clinical curriculum provides an adequate education in ambulatory and managed care settings, preventive care, team care, and cost-effective patient care.

4. The size, composition and competencies of the full-time faculty at medical schools and residency programs must be reviewed in order to assure that they are appropriate to train physicians for their future roles.

5. Residency programs need to train residents in managed care environments, to review and revise existing residency curricula to ensure that the knowledge, skills and attitudes necessary for future physicians are included, and to adequately prepare both their primary care and specialty graduates for the scope of practice, coordinated relationships, and referral patterns found in managed care organizations.

6. Additional training programs should be developed to meet the needs of the future health care delivery system, e.g. programs for retraining specialist physicians as generalist physicians; and fellowship training to develop physician leadership in managed care environments.

7. Medical schools, residency programs and teaching hospitals need to identify and review their teaching costs, and make their educational programs more efficient.

8. Evaluation at the medical school, residency and continuing medical education levels should incorporate the knowledge, skills and attitudes that will be needed by future physicians, and should be reviewed as medical education and training becomes more decentralized.

9. External certifying and accrediting organizations (e.g. the National Board of Medical Examiners, the National Board of Osteopathic Medical Examiners, the Accreditation Council for Graduate Medical Education, the American Osteopathic Association-Bureau of Professional Education, the Liaison Committee on Medical Education, the Residency Review Committees) need to address the new elements in health care delivery and reassess their structure, policies, and procedures in light of the findings in this report.

10. Medical schools and residency programs (in cooperation with the government and managed care organizations) need to develop an infrastructure in primary care research, and to conduct and support primary care research.

Managed Care Organizations:

1. Managed care organizations need to identify and define their needs as to the number, types and competencies of physicians, and should communicate this information and provide feedback to medical schools and residency programs.

2. Managed care organizations need to work cooperatively and collaboratively with medical schools

and residency programs in developing programs to address the physician workforce and medical education.

3. Managed care organizations (and all other third-party payers) need to share in the cost of paying for medical education, through an all-payer fund, and by developing mechanisms to support and encourage training and evaluation of medical students and residents in their sites. This could include:
   - bonus payments for teaching
   - sponsoring preceptorships and clerkships
   - residency programs in managed care environments or sharing sponsorship of a residency
   - teaching residents about practice management issues
   - collecting data regarding educational and training needs
   - collaborative health services research
   - collaborative development of standards of care
   - developing managed care leadership programs
   - innovative approaches and models of medical education.
4. Managed care organizations should work with external certifying and accrediting organizations to help address the issues identified in this report.

Government:

1. Continue to pay Medicare DME and IME for all residents who are graduates of US medical schools, but gradually reduce DME and IME for international medical graduate residents to 25 percent of the 1995 levels. Establish a transition program to assist institutions providing essential services which are dependent on IMG residents.
2. Upweight both DME and IME to encourage more generalist training and downweight DME and IME to discourage specialist training.
3. Provide both DME and IME payments for teaching in non-hospital settings, including physician offices, community health centers and managed care practices. Funding should follow the resident to his or her site of training.
4. Identify and remove the DME and IME components of the Average Adjusted Per Capita Cost (AAPCC) from Medicare capitation rates and utilize these funds specifically for GME purposes.
5. Create demonstration projects to foster the growth of consortia to manage medical education policy and financing.
6. Reauthorize, at 1995 pre-recision appropriated levels, the National Health Service Corps, Title VII (Health Professions Education), and primary care research funding.
7. Reauthorize the Council on Graduate Medical Education (COGME) to monitor the physician workforce and medical education system given the rapidly changing health care marketplace.
8. The federal government should play a major role in the collection and analysis of data regarding the physician workforce and medical education. This should include current data on staffing patterns in specific organizational forms of managed care (e.g., independent practice associations), information on the cost of medical education (medical students and residents) in ambulatory and managed care settings, and on the differences in the cost of training generalist and non-generalist physicians.

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SPECIAL ARTICLES

A NATIONAL SURVEY OF THE ARRANGEMENTS MANAGED-CARE PLANS MAKE WITH PHYSICIANS

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Abstract *Background.* Despite the growth of managed care in the United States, there is little information about the arrangements managed-care plans make with physicians.

Methods. In 1994 we surveyed by telephone 138 managed-care plans that were selected from 20 metropolitan areas nationwide. Of the 108 plans that responded, 29 were group-model or staff-model health maintenance organizations (HMOs), 50 were network or independent-practice–association (IPA) HMOs, and 29 were preferred-provider organizations (PPOs).

Results. Respondents from all three types of plan said they emphasized careful selection of physicians, although the group or staff HMOs tended to have more demanding requirements, such as board certification or eligibility. Sixty-one percent of the plans responded that physicians' previous patterns of costs or utilization of resources had little influence on their selection; 26 percent said these factors had a moderate influence; and 13 percent said they had a large influence. Some risk sharing with physicians was typical in the HMOs but rare in the PPOs. Fifty-six percent of the network or IPA HMOs used capitation as the predominant method of paying primary care physicians, as compared with 34 percent of the group or staff HMOs and 7 percent of the PPOs. More than half the HMOs reported adjusting payments according to utilization or cost patterns, patient complaints, and measures of the quality of care. Ninety-two percent of the network or IPA HMOs and 61 percent of the group or staff HMOs required their patients to select a primary care physician, who was responsible for most referrals to specialists. About three quarters of the HMOs and 31 percent of the PPOs reported using studies of the outcomes of medical care as part of their quality-improvement programs.

Conclusions. Managed-care plans, particularly HMOs, have complex systems for selecting, paying, and monitoring their physicians. Hybrid forms are common, and the differences between group or staff HMOs and network or IPA HMOs are less extensive than is commonly assumed. (N Engl J Med 1995;333:1678-83.)

UNDER managed care, the financing and delivery of health care are organized by a single entity. Managed-care plans are classified as health maintenance organizations (HMOs), preferred-provider organizations (PPOs), or various mixes of the two.[1] There are two major forms of HMO: group-model or staff-model HMOs and network or independent-practice–association (IPA) HMOs. Both types are usually at risk for the costs of care and therefore often control costs by requiring patients to be referred to specialists by primary care doctors. The doctors in network or IPA HMOs are usually in independent practice. A PPO, in contrast, consists of a group of doctors who agree to provide services to the plan's patients for discounted fees. Although managed-care plans are growing rapidly in the United States, they are controversial among physicians, who are concerned about their intrusion into medical practice.[2-4] Despite important studies of managed care,[5-7] there is relatively little information on the arrangements managed-care plans make to recruit, pay, and monitor physicians.[8] Much more is known about group or staff HMOs than about newer types, such as network or IPA HMOs and other forms of managed care, which account for much of its recent growth.[6,7,9] In contrast to group or staff HMOs, which use physicians in fully integrated group practices, network or IPA HMOs use community-based physicians in private practice and thus may intrude more on physicians' practices. The early network or IPA HMOs were loosely structured. Fee discounts and utilization review were the main new features.[6] Although many people assume that this loose structure continues today,[10,11] the assumption remains controversial.

To learn more about the arrangements different plans make with physicians, the Physician Payment Review Commission sponsored a telephone survey of managed-care plans, conducted in 1994 by Mathematica Policy Research.[12,13] The survey covered the recruitment of physicians, compensation and financial incentives, and nonfinancial influences on care, including oversight of quality, profiling, practice guidelines, and utilization review.

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METHODS

Samples and Response Rates

We restricted the survey to HMOs and PPOs. We used a two-stage selection process in which 20 market areas were chosen, and then a sample of plans operating in these areas was selected.[14] Plans were defined as entities in particular market areas rather than parent corporations. In the first stage, the 54 largest metropolitan areas (where 86

percent of HMO enrollees reside) were stratified according to size (under 1 million people or 1 million or more) and managed-care penetration (under 30 percent, 30 to 49 percent, or 50 percent or more). Within these strata, individual market areas were selected at random. The probability that any given metropolitan area would be selected was proportional to the size of its managed-care enrollment.

In the second stage, we selected one sample each of group or staff HMOs, network or IPA HMOs, and PPOs. An HMO was classified as a group or staff plan or as a network or IPA plan, and HMOs with more than one type of model were classified according to which type predominated, as reported in the Group Health Association of America's *National Directory of HMOs*.[14]

Although HMOs and PPOs enroll about the same number of people nationwide, we limited the PPO sample to 30 percent of the total, because PPOs have less diverse and less developed managed-care features than HMOs. We established the size of the group or staff HMO sample and the network or IPA HMO sample on the basis of their shares of total nationwide HMO enrollment (39 and 61 percent, respectively). The probability that a given plan would be selected was generally proportional to the size of the plan within its market. However, we did seek a minimum of one plan of each type from each market. Selecting the PPOs was complicated by the absence of a good list of PPOs from which to sample and by the need to obtain preliminary information by telephone.

Although the original sample consisted of 146 plans, the effective sample was 138 plans, because 5 also offered HMO products and thus were already in our study through the HMO sample and 3 had merged. The overall response rate was 78 percent: 78 percent for the group or staff HMOs, 83 percent for the network or IPA HMOs, and 70 percent for the PPOs (which were surveyed last). National data show that the HMOs that responded were generally similar to those that did not, except that the response rates were lower (17 of the 31 HMOs, or 55 percent) for the plans owned by commercial insurers.

Questionnaire

All plans received the same questionnaire, which contained more than 300 items. It was developed on the basis of a literature review and advice from a panel of researchers and experts in the delivery of managed care.

The plans were surveyed between June and September 1994. Each received a letter on Physician Payment Review Commission letterhead along with a list of panel members and letters of endorsement from industry trade associations. The respondents were senior clinical managers designated by the chief executive officers of the plans. Because of the length of the questionnaire, we allowed up to three respondents, whose areas of knowledge corresponded to the three major areas surveyed.

Sources of Error and Bias

Our results are limited in that they are based on what the respondents said rather than on an audit of what they do, how well they do it, and how strongly the plans' arrangements influence the practice of physicians. Any bias in the results probably arises from overreporting of managed-care approaches, especially those regarded as desirable.

The findings are reported according to the type of plan. Because of the small sample, we mention only differences that are large and that show a consistent trend across similar variables. Statistically significant differences were determined with use of the chi-square test.[15] Smaller plans are underrepresented relative to their number but are not underrepresented relative to their share of national managed-care enrollment.

Results

Table 1 shows the characteristics of the 108 study plans. Together they enrolled 33.5 million people; 15.2 million of these were in HMOs, representing 35 percent of the national HMO enrollment of 41.3 million people when the sample was selected. The plans usually had at least 100,000 members, and often more than 250,000. Nearly all had been formed before 1990, and many before 1980. For-profit plans accounted for 59 percent of the sample and for about three quarters of the network or IPA HMOs and the PPOs.

Table 1. Characteristics of 108 Managed-Care Plans.

Characteristic	All Plans (N = 108)	Group or Staff HMOs (N = 29)	Network or IPA HMOs (N = 50)	PPOs (N = 29)
	percent			
Enrollment*				
<50,000	17	34	12	7
50,000–99,999	15	14	14	17
100,000–249,999	24	31	20	24
≥250,000	44	21	53	52
First year of operation				
Before 1970	10	34	0	3
1970–1979	26	41	30	0
1980–1984	24	14	18	45
1985–1989	35	7	48	41
1990 or later	4	3	2	10
For profit	59	34	74	72
Ownership				
Commercial insurer	8	7	10	7
Blue Cross–Blue Shield	16	10	20	14
National HMO or managed-care company	24	34	28	7
Other†	52	48	42	72
Federally qualified HMO‡	64	83	57	—
Managed-care penetration in market§				
Low (<30%)	28	24	26	34
Medium (30–49%)	23	24	20	28
High (>49%)	49	52	54	38
Market size				
<1 million	19	17	16	28
≥1 million	81	83	84	72

*Plans were asked to provide enrollment figures according to the benefit plan offered. For PPO and other point-of-service benefit plans, plans could provide the number of persons covered or the number of subscribers. To convert the number of subscribers to the number of persons, we used the ratio of 2.2 persons per subscriber, which is published by the Group Health Association of America.

†Other includes other national companies, independent owners, joint ventures, physician owners, community or regional groups, hospitals, and other nonprofit groups.

‡Federal qualification is generally not applicable to PPOs, except for the few that offer HMO products.

§Market penetration is the percentage of the area's population enrolled in managed-care plans.

Forming and Maintaining the Network

When asked which of three statements best characterized their policy on selecting physicians, most respondents chose "careful selection" (71 percent) rather than "prune later" (18 percent) or "as broad as feasible" (11 percent). Some plans (38 percent) were subtracting physicians ("tightening" the network), and others (43 percent) were adding physicians ("widening" the network). The group or staff HMOs were somewhat more likely to report widening their networks (51 percent) than the network or IPA HMOs (42 percent) or the PPOs (34 percent).

Table 2 summarizes the procedures used in recruiting physicians. When selecting physicians, the group or staff HMOs tended to have more demanding requirements than the other types of plan. Ninety percent of group or staff HMOs, but only 48 percent of the network or IPA HMOs and 41 percent of the PPOs, required board certification or eligibility. Both types of HMO were more

Table 2. Procedures Used by Managed-Care Plans to Recruit Physicians.

PROCEDURE	ALL PLANS (N = 108)	GROUP OR STAFF HMOs (N = 29)	NETWORK OR IPA HMOs (N = 50)	PPOs (N = 29)
		percent		
Selecting physicians				
Require board certification or board eligibility*	57	90	48†	41†
Require privileges at network hospital or ability to obtain them	82	86	88	69‡
Require agreement to take predetermined number of patients or not to practice outside plan§	37	48	48	7†¶
State that the effect of previous costs or utilization patterns on the decision was large	13	4	18‖	14
Contracting with physicians				
Verify license and credentials**	100	100	100	100
Consult National Practitioner Data Bank, sources on substance abuse, or both	92	86	94	93
Visit physician's office, review facility, and screen care through medical records††				
Do all three	43	38	66‖	7†¶
Do none of these	27	34	8†	52¶
Review quantitative data from indemnity claims, hospital-discharge data, or both	37	24	38	48‖
Meeting four criteria for orienting new physicians‡‡	30	69	22†	3†‡

*Other plans may allow exceptions.

†P<0.01 for the comparison with group or staff HMOs.

‡P<0.10 for the comparison with network or IPA HMOs.

§Only 100 plans responded (27 group or staff HMOs, 45 network or IPA HMOs, and 28 PPOs).

¶P<0.01 for the comparison with network or IPA HMOs.

‖P<0.10 for the comparison with group or staff HMOs.

**Only 102 plans responded (25 group or staff HMOs, 48 network or IPA HMOs, and 29 PPOs).

††Because they are much more likely to hire than to contract with physicians who practice in their facilities, group or staff HMOs may find these steps unnecessary or address the underlying concerns in different ways (e.g., by contacting references).

‡‡The four criteria are as follows: plan has orientation meetings specifically for medical staff, 75 percent or more of physicians participate, top management is involved, and less than 75 percent of time is devoted to administrative issues. Of all plans, 5 percent met none of the criteria, 17 percent one, 23 percent two, 26 percent three, and 30 percent four.

likely than the PPOs to require that new physicians either have privileges at network hospitals or be able to obtain them. Both types of HMO were also more likely than the PPOs (48 percent vs. 7 percent) to require physicians to provide care for a predetermined number of patients or to practice only within the plan.

A minority of the plans (37 percent) used quantitative information about physicians' performance and practice style in selecting new physicians. However, 63 percent of all the plans and 73 percent of the network or IPA HMOs took into account qualitative information, such as professional reputation and patterns of care. When asked how much previous patterns of costs or utilization of resources influenced the selection of physicians, 61 percent of the respondents characterized the influence as small, 26 percent as moderate, and 13 percent as large.

Before signing a contract with a new physician, virtually all plans verified the physician's license and credentials, and almost all screened for reportable disciplinary actions, substance abuse, or similar problems. Sixty-six percent of the network or IPA HMOs visited the physician's office, reviewed whether the facility met set standards, and screened care by reviewing medical records. Only 7 percent of the PPOs took all these steps, and 52 percent took none of them.

Ninety-three percent of the plans had a formal process for recredentialing physicians, although 62 percent began to do this only in 1991 or later. Rates of physician turnover were low and were consistent with those in other recent studies.[16] Sixty-seven percent of the group or staff HMOs, 79 percent of the network or IPA HMOs, and 86 percent of the PPOs had an annual turnover rate (including both voluntary and involuntary departures) of 5 percent or less. The higher rate of turnover in the group or staff HMOs resulted from the turnover of newly hired physicians in their first two years of employment. The group or staff HMOs were more likely to have extensive orientation programs for new physicians than were the network or IPA HMOs or the PPOs.

Risk Sharing, Payment, and Financial Incentives

Risk sharing with physicians was usual in both types of HMO but rare in the PPOs (Table 3). Among the network or IPA HMOs, 84 percent had some sharing of risk with primary care physicians; 56 percent used capitation as a primary method of payment; and 28 percent used fee-for-service payments in some form along with withholding or bonuses. In contrast, only 20 percent of the network or IPA HMOs used capitation as a predominant method of payment for individual specialists; 54 percent had some form of risk sharing with specialists, 47 percent used capitated payment for certain specialties, and 33 percent used competitive bidding to obtain some specialty services. The specialties in which physicians were most commonly paid on a capitated basis were cardiology, mental health, radiology, orthopedics, and ophthalmology. The group or staff HMOs paid primary care physicians on a salary or capitated basis, but fewer than half did the same for specialists (data not shown). The PPOs primarily used fee-for-service payments.

Most of the HMOs adjusted payments to primary care physicians to create performance-based incentives. Fifty percent of the group or staff HMOs and 74 percent of the network or IPA HMOs adjusted payments according to utilization and cost patterns. More than half of the group or staff HMOs and the network or IPA HMOs adjusted payment on the basis of patients' complaints and measures of the quality of care. The group or staff HMOs were more likely than the network or IPA HMOs to reward productivity and ten-

ure in the plan, whereas the network or IPA HMOs were more likely to adjust payments according to the results of consumer surveys.

Practice and Utilization Management

The plans used several different nonfinancial methods to influence medical practice (Table 4). Ninety-two percent of the network or IPA HMOs and 61 percent of the group or staff HMOs required patients to select a primary care physician, who was responsible for most referrals to specialists.

More than 95 percent of the HMOs and 62 percent of the PPOs had a written quality-assurance plan, a quality-assurance committee, and a patient-grievance system. Seventy-nine percent of the group or staff HMOs and 70 percent of the network or IPA HMOs required outcome studies for particular clinical conditions, had targeted quality-improvement initiatives, and used outcome studies to identify needs for improvement and to gauge success. Studies of the treatment of asthma and diabetes and the use of mammography were the most common. Sixty-nine percent of the group or staff HMOs and 80 percent of the network or IPA HMOs used physician profiles and applied them. Substantially fewer PPOs than HMOs used outcome studies (31 percent) or physician profiles (45 percent) in this way.

Table 3. Procedures Used by Managed-Care Plans to Pay Physicians.

Procedure	All Plans (N = 108)	Group or Staff HMOs (N = 29)	Network or IPA HMOs (N = 50)	PPOs (N = 29)
		percent		
Primary care physicians				
Predominant payment for sole or largest benefit plan involves:				
Some sharing of risk with providers*	60	68	84	10†‡
Capitation as predominant method	37	34	56§	7†‡
Salary with no withholding or bonus	8	28	2‡	0‡
Fee for service with no withholding or bonus	31	3	12	90†‡
Basis of payment adjustment¶				
Utilization or cost measures	57	50	74§	34†
Patient complaints or grievance	49	57	61	21†‡
Quality measures	46	54	64	7†‡
Consumer surveys	36	37	55	3†‡
Provider productivity	24	43	26	3†‡
Enrollee turnover rate	21	11	36§	3†
None of above	28	29	14	55†§
Financial reward given for devoting a higher percentage of time to plan, increasing number of patients, longevity, exclusivity, or willingness to provide a wider range of services‖	52	69	64	14†‡
Specialty physicians				
Predominant payment for sole or largest benefit plan involves:				
Some sharing of risk with providers* **	43	59	54	3†‡
Capitation as predominant method	18	31	20	0†‡
Salary with no withholding or bonus	6	17	2§	0§
Fee for service with no withholding or bonus	52	24	42	97†‡
Capitation for individual specialties, pooled capitation across specialties, risk sharing based on withholding or bonuses, or competitive bidding				
Any of above	69	97	86	10†‡
Capitation for individual specialties	42	69	47	7†‡
Competitive bidding	28	31	33	17

*Physicians are paid some form of capitation (with or without other withholding or bonuses), or withholding or bonuses are applied to salary or fee-for-service arrangements. Withholding is similar to a bonus, except that funds are initially withheld and then returned in part or in whole at the end of the payment period.

†$P<0.01$ for the comparison with network or IPA HMOs.

‡$P<0.01$ for the comparison with group or staff HMOs.

§$P<0.10$ for the comparison with group or staff HMOs.

¶The number of plans responding to this item ranged from 104 to 106 (27 to 29 group or staff HMOs, 48 or 49 network or IPA HMOs, and 29 PPOs).

‖This question did not refer specifically to primary care physicians, but these approaches are most relevant to them.

**Only 107 plans responded (29 group or staff HMOs, 49 network or IPA HMOs, and 29 PPOs).

Practice guidelines were used less often than outcome studies or physician profiles. About three quarters of the HMOs and 28 percent of the PPOs used formal, written practice guidelines. These most commonly applied to childhood immunizations, the management of asthma, mammographic screening, and screening for colorectal cancer. Almost all plans had procedures for utilization review. In most plans, patient-level claims or encounter data on physicians' services and other ambulatory care services were collected even when providers were paid on a capitated or salaried basis. But physicians submitted more than 90 percent of encounter forms (dummy claims) in only a minority of plans. Such information is less likely to be available in the network or IPA HMOs than in the group or staff HMOs.

Similarities among HMO Plans

There were many similarities in structure between the group or staff HMOs and the network or IPA HMOs. Fifty-five percent of the plans identified as group or staff HMOs were actually mixed models, with traditional HMO coverage provided by a network or IPA. Only 59 percent of the group or staff HMOs used physicians in large multispecialty groups to provide care to more than two thirds of their enrollees. Moreover, only 44 percent reported that their members made up 80 percent or more of the practice of a typical physician in their plan, whereas 45 percent of the network or IPA HMOs reported that their members accounted for at least 20 percent of a typical physician's practice.

Discussion

Our findings indicate that managed-care plans have complex systems for recruiting physicians, paying them, and monitoring their performance. Such systems are much more likely to be found in HMOs than in PPOs, perhaps because purchasers have recently encouraged the accreditation of such plans by the National Committee for Quality Assurance.[17]

Our study is descriptive, and the data come from un-

Table 4. Procedures Used by Managed-Care Plans to Monitor Practice and Utilization.

PROCEDURE	ALL PLANS (N = 108)	GROUP OR STAFF HMOs (N = 29)	NETWORK OR IPA HMOs (N = 50)	PPOs (N = 29)
		percent		
Clinical structure (traditional HMO benefit plans)				
Plan generally holds primary care physicians responsible for referral to most specialists	94	96	92	—*
Patients are required to select an individual primary care physician†	82	61	92‡	—*
Medical management				
Quality structure				
Plan has a quality-assurance document, quality-assurance committees, and active patient-grievance procedures	87	97	96	62‡§
Quality monitoring and focused studies				
Plan requires clinically focused or outcome studies for specific clinical conditions and targeted quality-improvement initiatives, and uses them to identify needed improvements and to gauge success¶				
All of the above	62	79	70	31‡§
Focused studies conducted regularly	83	100	96	45‡§
Profiling				
Plan uses profiling, provides physician feedback, and identifies areas for system-wide improvement‖				
All of the above	68	69	80	45§**
Any use of profiles	74	76	86	52§**
Practice guidelines				
Plan uses established, formal, written practice guidelines, does so fairly extensively (in more than a few areas), monitors compliance, and meets with physicians to review results††				
All of the above	26	31	34	7§**
Any use of guidelines	63	76	76	28‡§
Utilization review				
Preadmission review for all nonemergency admissions, concurrent and retrospective review, discharge planning (that does not rely on hospital staff), and ambulatory review for resource-intensive services‡‡				
At least four of five	62	72	70	37‡§
Any of the above	95	97	100	86§
Data				
Plan maintains patient-level claims or encounter data base for hospital stays	91	90	100**	76§
Plan has patient-level claims or encounter data base for in-plan physician and other services, requires dummy claims or encounter forms, and estimates that ≥90% of encounter forms are submitted				
Requires data base	88	93	94	72§**
Requires data base with dummy claims§§	74	82	69	—*
Requires data base with dummy claims§§ and ≥90% of encounter forms submitted	24	39	13**	—*

*Only applicable to six PPOs with traditional HMO benefits.

†Only 107 plans responded (28 group or staff HMOs, 50 network or IPA HMOs, and 29 PPOs).

‡$P<0.01$ for the comparison with group or staff HMOs.

§$P<0.01$ for the comparison with network or IPA HMOs.

¶Clinically focused studies were defined as studies of performance of patient outcomes in areas such as childhood immunization, pregnancy, diabetes, breast cancer or mammography, lead toxicity, and sickle cell disease. One of the items specified that these must be done on a regular basis.

‖Profiling was defined as examining patterns of practice through various use or outcome rates aggregated over time for a defined population of patients and comparing them with other practice patterns.

**$P<0.10$ for the comparison with group or staff HMOs.

††Practice guidelines were defined as an explicit statement of what is known and believed about the benefits, risks, and costs of particular courses of medical action to assist decisions about appropriate health care for specific clinical conditions.

‡‡Respondents were asked to characterize their process for preadmission review in various ways. Those not counted as "yes" include, for example, those in which no specific action is needed, although the pattern may be monitored, those in which an intermediate entity or patient is responsible for preadmission review, and those covering only some nonemergency admissions.

§§If applicable (excludes those using fee for service as the predominant way of paying primary care and specialty physicians in the sole or largest benefit plan).

audited reports from the plans themselves. Thus, it can offer little insight into how the arrangements between physicians and managed-care plans influence the accessibility, cost, or quality of care.

Our findings do suggest, however, that many of the differences between specific HMOs cannot be explained by their classification as group or staff HMOs or as network or IPA HMOs. The Congressional Budget Office's estimates assume that most cost savings attributable to HMOs result from group or staff plans, not from network or IPA plans, on the basis of the belief that most network or IPA HMOs do not create the conditions on which savings depend[10,11]: "These conditions include [the presence of] cost conscious providers, an effective network for information and control, [placing] providers at financial risk, and [generating] a substantial portion of each provider's patient load."[10] We found that many large network or IPA HMOs met at least some of these conditions and that the two types of HMO did not differ from one another as much as is often assumed. Diversity in managed care occurs within as well as across types of plans.

Common arrangements between managed-care plans and physicians appear to result in less independence and less control over income and practice for physicians. Nonetheless, the emphasis on outcome studies

and enrollee-based clinical information may have beneficial effects for plan members, because this approach accounts for those who do not use services as well as those who do.

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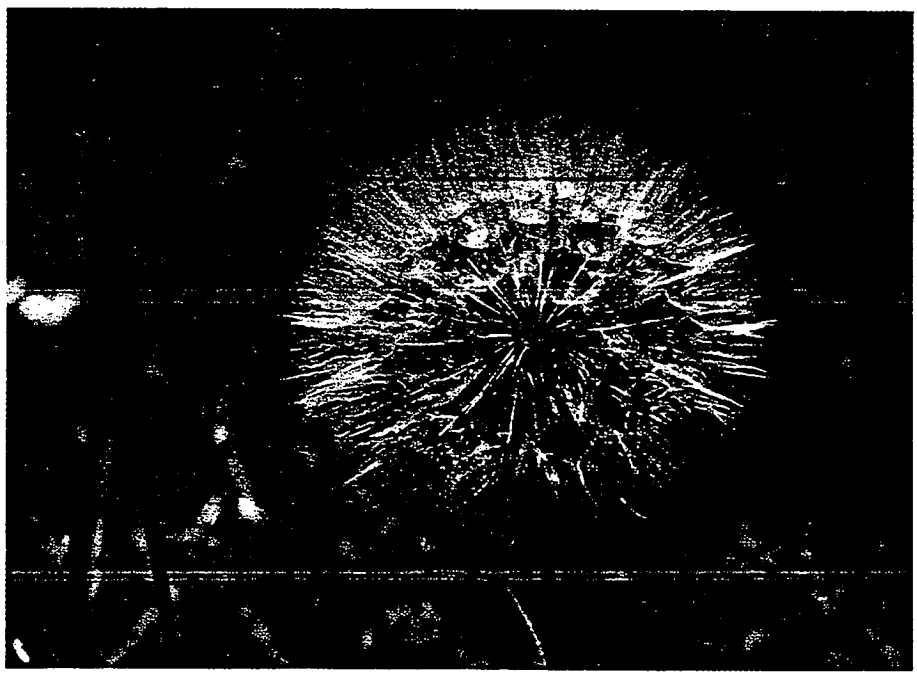

ALAN D. BRUSH, M.D.

THE GROWTH OF MEDICAL GROUPS PAID THROUGH CAPITATION IN CALIFORNIA

JAMES C. ROBINSON, PH.D., AND LAWRENCE P. CASALINO, M.D.

Abstract *Background.* In California, it is common for health maintenance organizations (HMOs) to contract with large medical groups that are paid through capitation and are responsible for managing a full spectrum of medical services.

Methods. We studied six large medical groups in California — Bristol Park Medical, Friendly Hills HealthCare Network, HealthCare Partners Medical Group, Mullikin Medical Centers, Palo Alto Medical Foundation, and San Jose Medical Group — that are paid through capitation and that are growing as a result of contracts with managed-care organizations. We conducted interviews and obtained data on factors such as patient enrollment, capitation and other revenue, numbers of days spent by enrollees in the hospital, and numbers of visits to physicians per enrollee.

Results. Between 1990 and 1994, the number of HMO enrollees whose care was paid for through capitation in the six medical groups increased by 91 percent, from 398,359 to 759,474. In 1994, the mean number of hospital days per 1000 HMO enrollees ranged from 120 to 149 for non-Medicare patients and from 643 to 936 days for Medicare patients. By comparison, in 1993 the mean numbers of hospital days per 1000 HMO enrollees not covered by Medicare were 232 for California and 297 for the United States; for HMO enrollees covered by Medicare, the numbers were 1337 for California and 1698 for the United States. In 1994, the average annual number of visits to physicians for HMO patients in the six groups not covered by Medicare ranged from 3.1 to 3.9; for Medicare patients, it ranged from 6.8 to 9.3; these rates were slightly lower than statewide and national rates. Four of the groups have sold their assets (such as facilities, supplies, equipment, and patients' charts) to outside investors; the physicians remain employed by physician-owned professional corporations.

Conclusions. Medical groups paid through capitation offer a model for the status of physicians in managed-care systems that differs from the employee status offered by staff-model HMOs and the subcontractor status offered by HMOs that negotiate directly with individual physicians. Despite their growth, such medical groups in California face substantial challenges, such as obtaining the financial assets necessary to sustain rapid growth. (N Engl J Med 1995;333:1684-7.)

IN managed-care systems, health care organizations bear the financial risk of operating within a predetermined budget and are responsible for coordinating a full spectrum of clinical services.[1,2] In many regions of the United States, health maintenance organizations (HMOs) have assumed these roles, employing or contracting with physicians while maintaining budgetary authority and providing managerial expertise.[3] Physicians have also organized medical groups that are paid on a capitated basis and are responsible for managing the use of services, costs, and quality.[4]

Medical groups paid through capitation have grown markedly in California, a state where nearly 50 percent of people with commercial health insurance and 30 percent of Medicare beneficiaries are enrolled in HMOs.[5] Integrated medical groups are paid on a capitated, per-member-per-month basis for professional services and, increasingly, for hospital, home health, and pharmacy services. These groups manage the full spectrum of care, including the services provided by their own physicians and those provided by outside physicians, hospitals, and ancillary organizations. They are increasingly accountable for providing data on patients' satisfaction, the use of preventive services, and other measures of performance. We prepared case studies of six large medical groups in California that are paid through capitation and are actively seeking to grow through increased numbers of contracts with managed-care organizations.

METHODS

The six medical groups were chosen to reflect the existing diversity among medical groups paid through capitation with respect to geographic location, primary care and specialty mix, relationship with hospitals, and ownership structure. They were selected after initial visits to 19 integrated medical groups in California. The six groups obtain the majority of their patients through HMO contracts and receive most of their revenue through capitated payments. The groups do not pay their member physicians through capitation. Instead, they pay a salary plus an annual bonus based on the physician's productivity, patients' satisfaction, and profitability of the group. The groups differ considerably in the extent to which they rely on outside contracting rather than internal referrals for specialty services, but all contract with nonmember physicians for some services. Although three of the groups own local community hospitals, all six contract with multiple independent hospitals to obtain geographic coverage and tertiary care services. Four of the groups have sold their assets to outside investors, including two that had previously sold minority interests. The assets sold include the groups' facilities, supplies and equipment, and patients' charts. Individual clinicians have remained employees of physician-owned professional corporations that contract with the investing organizations to provide medical care.

Bristol Park Medical is a primary care group with 61 physicians serving 94,000 HMO patients at 10 sites in coastal Orange County, a suburban area south of Los Angeles. It owns 50 percent of a local community hospital and is owned by its member physicians. The Friendly Hills HealthCare Network is a multispecialty medical group with 147 physicians and 100,000 HMO patients at 15 sites in northern Orange County. It owns its own hospital. In 1994, the medical group and hospital were sold by the member physicians to Caremark, a for-profit diversified health care and physician-practice–management company. HealthCare Partners Medical Group is a primary care–based multispecialty medical group with 335 physicians serving 200,000 HMO patients at 28 sites throughout Los Angeles. It is owned by its member physicians. Mullikin Medical Centers is a primary care–based multispecialty group with 485 physicians and 249,000 HMO patients at several dozen sites in Los Angeles, Orange County, and the San Francisco area. It owns a hospital in southern California and has merged with several medical groups in the Pacific Northwest. In 1993, Mullikin sold a minority share to the Daughters of Charity, a national nonprofit hospital system. In 1995, Medpartners, a for-profit physician-practice–management company based in Birmingham, Alabama, acquired the tangible assets of Mullikin. The Palo Alto Medical Foundation is a multispecialty medical group with 162 physicians and 57,000 HMO patients at three sites near Palo Alto, south of San Francisco. In 1992 it was purchased by Sutter Health, a nonprofit hospital system. The San Jose Medical Group is a primary care–based multispecialty group with 103 physicians caring for 59,000 HMO patients at nine sites in the San Jose area. Until recently, it was owned by its physicians, with the exception of a minority share

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owned by Alexian Brothers, a nonprofit hospital system. In the fall of 1995, the physicians sold the group's assets to UniHealth America, a nonprofit health care system based in Los Angeles.

We interviewed clinical and administrative leaders in each group, such as the chief executive officer, the medical director, the chief operating officer, the chief financial officer, and the director of contracting. We interviewed other physician and nonphysician staff members with responsibilities for hospital-utilization management, management of specialty referrals, skilled nursing facilities, home health care, and case management for chronically ill patients. Key people were interviewed more than once. The interviews were supplemented by reviews of trade publications and by interviews with leaders in other medical groups, hospital systems, HMOs, business purchasing alliances, professional associations, and state regulatory agencies.

Data on enrollment, revenues, HMO contracts, visits to physicians, and hospital services were obtained through the Unified Medical Group Association, a professional association representing 87 medical groups serving 2.8 million HMO patients in California and 1.4 million in other states. This association obtains financial and utilization data from its members and is responsible for ensuring the consistency and quality of the data, although the data themselves are not audited. Additional data and documents were obtained directly from each group. Some of the data we report were derived from the administrative records of the medical groups, which are used for internal accounting purposes and for reporting to HMOs and purchasers.

RESULTS

Patient Enrollment and Capitation Payment

The growth of the six medical groups from 1990 to 1994 is shown in Table 1. A severe economic recession in California has resulted in a considerable loss of jobs and health insurance. Nonetheless, these groups increased their numbers of HMO enrollees paid for through capitation by 91 percent, from 398,359 to 759,474. Growth was particularly dramatic for the HealthCare Partners and San Jose medical groups, which doubled their enrollment, and for Mullikin Medical Centers, which almost tripled its enrollment. Growth was achieved both by adding new physicians and patients and by merging with other medical groups. The figures in Table 1 understate the overall scale of these organizations, since they exclude enrollment in independent practice associations owned or managed by the integrated groups.

The financial base of the six groups comes largely from capitation payments for professional services. The HealthCare Partners Medical Group, for example, earned $206.3 million in 1994, of which $158.5 million (77 percent) was from capitation, $31.5 million (15 percent) from risk pools for the cost of hospital services, $6.0 million (3 percent) from HMO revenues not based on capitation, and $8.2 million (4 percent) from fee-for-service patients. Bristol Park Medical, Friendly Hills HealthCare Network, and Mullikin Medical Centers own their own community hospitals and therefore, under California law, can receive capitation payments from HMOs for hospital services as well as for professional services. These payments cover not only services provided in the hospitals these groups own but also services provided in other hospitals with which they contract. The three groups that do not own their own hospitals gain analogous revenues by negotiating with HMOs for the greater part (as much as 99 percent) of savings from hospital risk pools.

The six groups vary considerably in the extent to which they provide or subcontract for specialty services. Although the primary care–based Bristol Park Medical and the multispecialty Friendly Hills HealthCare Network had similar patient enrollments in 1994, Bristol Park had 61 physicians and provided 57 percent of the professional services required by patients, whereas Friendly Hills had 147 physicians and provided 92 percent of the necessary professional services. Both groups receive capitation payments for the full range of primary, specialty, and hospital care. Of the six groups, the Palo Alto Medical Foundation is the only one that received the majority of its revenue for professional services from sources other than capitation payments.

Although these six groups contract with several HMOs each, a large percentage of their HMO patients come from a small number of large plans. In 1994, each group received 55 percent or more of its HMO patients not covered by Medicare from three contracts. Five of the groups received a lower percentage of their patients from their top three non-Medicare contracts in 1994 than in 1990, as they sought new contracts to expand their patient bases. The San Jose Medical Group and the Palo Alto Medical Foundation each had an exclusive contract with an HMO in 1990 but shifted to nonexclusive contracts to allow more rapid growth and to reduce their dependency on a single contract.

Utilization Management

In 1994, hospital utilization by HMO patients not covered by Medicare ranged from 120 to 149 days per

Table 1. Selected Characteristics of Six Medical Groups in California.

CHARACTERISTIC	BRISTOL PARK MEDICAL	FRIENDLY HILLS HEALTHCARE NETWORK	HEALTHCARE PARTNERS MEDICAL GROUP	MULLIKIN MEDICAL CENTERS	PALO ALTO MEDICAL FOUNDATION	SAN JOSE MEDICAL GROUP
No. of HMO enrollees						
1990	72,912	90,048	90,618	88,539	31,112	25,130
1994	94,304	100,051	200,415	249,085	57,095	58,524
Professional-services capitation revenue (thousands of $)						
1990	27,235	54,741	65,596	41,935	16,778	12,010
1994	49,077	75,470	158,452	154,088	39,263	37,420
Other revenue (thousands of $)						
1990	10,713	22,479	21,720	18,518	50,707	14,990
1994	18,153	31,465	47,354	102,731	50,737	21,380
No. of member physicians						
1990	37	113	150	79	146	49
1994	61	147	335	485	162	103
% of professional services delivered by member physicians						
1990	44	86	79	89	94	79
1994	57	92	57	86	89	72
% of patients in top three commercial HMO contracts						
1990	83	74	53	79	100	100
1994	71	55	65	68	69	72

1000 enrollees, with an average (weighted to account for the enrollment in each group) of 139 (Table 2). Hospital utilization by Medicare beneficiaries ranged from 643 to 936 days per 1000 enrollees, with an average of 893 (Table 3). These utilization rates are 40 percent below the California average for enrollees in commercial HMOs (232 days) and 33 percent below the California average for HMO enrollees covered by Medicare (1337 days). The number of hospital days per 1000 enrollees is even higher for HMOs in other states. The inpatient utilization rate for all HMOs in the United States was 297 days per 1000 patients covered by commercial insurance and 1698 days per 1000 Medicare patients in 1993.[5] These rates exceed the enrollment-weighted average rates for these six groups by 114 and 90 percent, respectively.

Table 3. Use of Medical Services by HMO Patients Covered by Medicare.

Medical Group	No. of Enrollees	Total Physician Visits	Physician Visits per Enrollee	No. of Hospital Discharges	Average Length of Hospital Stay	Hospital Days per 1000 Enrollees
Bristol Park Medical						
1990	0	0	—	0	—	—
1994	2,427	22,669	9.3	526	4.2	905
Friendly Hills HealthCare Network						
1990	11,428	86,911	7.6	2751	4.0	975
1994	15,401	117,697	7.6	2626	5.4	914
HealthCare Partners						
1990	20,292	152,044	7.5	5485	3.2	850
1994	28,717	195,848	6.8	6837	3.9	936
Mullikin Medical Centers						
1990	3,048	26,437	8.7	1284	4.3	1027
1994	19,294	142,525	7.4	4662	3.7	894
Palo Alto Medical Foundation						
1990	0	0	—	0	—	—
1994	3,155	—	—	443	4.6	643
San Jose Medical Group						
1990	0	0	—	0	—	—
1994	7,168	64,024	8.9	1428	3.9	774
All HMO patients covered by Medicare (1993)						
California	—	—	9.1	—	—	1337
Massachusetts	—	—	7.4	—	—	2137
Minnesota	—	—	7.6	—	—	1940
New York	—	—	7.5	—	—	2133
United States	—	—	7.9	—	—	1698

The groups had rates of physician visits per enrollee in 1994 that were slightly lower than those for all California HMOs and for HMOs in other states. The average annual number of visits to physicians for non-Medicare patients ranged from 3.1 to 3.9, with an enrollment-weighted average of 3.4 (Table 2). In 1993, the comparable rate for all California HMOs was 3.8 visits per enrollee, and the national HMO rate was 3.6 visits. For Medicare patients, the annual number of physician visits ranged from 6.8 to 9.3, with an enrollment-weighted average of 7.4, as compared with an average of 9.1 visits for California HMOs and 7.9 visits for all U.S. HMOs (Table 3).

Between 1990 and 1994, the number of hospital days per 1000 HMO enrollees not covered by Medicare declined by 16 percent at Bristol Park, 37 percent at Friendly Hills, 32 percent at HealthCare Partners, 16 percent at Mullikin, and 40 percent at San Jose (Table 2). The number of hospital days per 1000 enrollees covered by Medicare declined by 6 percent at Friendly Hills and by 13 percent at Mullikin (Table 3). It increased at HealthCare Partners because of a merger with a group that had higher utilization rates. For most plans, the number of physician visits per enrollee declined between 1990 and 1994.

Table 2. Use of Medical Services by HMO Patients Not Covered by Medicare.

Medical Group	No. of Enrollees	Total Physician Visits	Physician Visits per Enrollee	No. of Hospital Discharges	Average Length of Hospital Stay	Hospital Days per 1000 Enrollees
Bristol Park Medical						
1990	72,912	351,737	4.8	3,820	3.1	162
1994	91,877	361,266	3.9	4,445	2.8	136
Friendly Hills HealthCare Network						
1990	78,620	334,844	4.3	4,246	3.5	191
1994	84,650	284,619	3.4	4,685	2.2	120
HealthCare Partners						
1990	70,326	294,260	4.2	5,691	2.7	218
1994	171,698	530,045	3.1	8,269	3.1	149
Mullikin Medical Centers						
1990	85,491	289,766	3.4	5,457	2.6	166
1994	229,791	801,219	3.5	10,003	3.2	139
Palo Alto Medical Foundation						
1990	31,112	—	—	—	—	—
1994	53,940	—	—	2,318	3.3	140
San Jose Medical Group						
1990	25,130	99,366	4.0	1,597	3.7	235
1994	51,356	173,448	3.4	2,360	3.0	140
All HMO patients not covered by Medicare (1993)						
California	—	—	3.8	—	—	232
Massachusetts	—	—	4.2	—	—	343
Minnesota	—	—	3.1	—	—	321
New York	—	—	3.7	—	—	356
United States	—	—	3.6	—	—	297

Discussion

Between 1990 and 1994, the six medical groups we studied grew rapidly. HMOs in California have come to rely on such independent physician organizations to manage the delivery of care. These groups are financially at risk for the costs of care because they are paid through capitation.[6]

Many physicians who are not employed by group- or staff-model HMOs or who do not practice in large groups view managed-care organizations in terms of the intervention of a third party in clinical decision making. Such physicians may be affiliated with several HMOs, each of which has its own network

of specialists and hospitals and its own methods of managing utilization. In contrast, the six medical groups we studied manage utilization through their own medical directors and physician committees. It is our impression that this method of management allows decisions to be based on more detailed clinical information than is available to outside reviewers and facilitates a cooperative rather than an adversarial approach to utilization management. These groups offer a model for the status of physicians in managed-care systems that differs from the employee status offered by staff-model HMOs and the subcontractor status offered by HMOs that negotiate directly with individual physicians.

For all the medical groups, the number of hospital days per 1000 enrollees each year was substantially lower than California or national averages. The utilization rates for physicians' and hospitals' services that were reported by these groups, however, were not adjusted for case mix. Thus, they could not be compared directly with adjusted rates for other groups of patients. We cannot exclude the possibility that the lower rates of hospital utilization and visits to physicians reflect the provision of services to relatively healthy groups of patients. Nevertheless, if extrapolated to the state and national level, these low rates of hospital utilization would result in an excess hospital capacity substantially higher than that estimated on the basis of utilization rates in staff-model HMOs.[7]

It is noteworthy that the six groups had rates of visits to physicians per enrollee in 1994 that were slightly lower than those for all California HMOs and for HMOs nationally. Given efforts to substitute outpatient for inpatient care, higher numbers of visits to physicians per year might have been expected. A possible explanation may be the substitution of visits to nurse practitioners and physician's assistants for visits to physicians. In 1994, for example, Bristol Park Medical had 16 such practitioners supporting its 61 primary care physicians. We did not collect overall data on visits to nurse practitioners and physician's assistants, however, and comparative state and national data were not available.

It is important to emphasize that a considerable portion of the data made available to us was derived from the internal records of the medical groups. Although the consistency and quality of the data were improved by the Unified Medical Group Association, the accuracy of the data could not be independently verified.

Despite their growth, independent medical groups in California face substantial challenges. Success in managed care requires continued rapid growth, which in turn requires substantial investment in new facilities, management-information systems, and the acquisition of additional member physicians and medical groups. Unlike HMOs in some states, those in California, with the exception of Kaiser Permanente, generally do not seek to employ physicians directly. Their primary emphasis has been on acquiring purchaser contracts and making use of their actuarial experience and marketing expertise. Independent medical groups have sold — or considered selling — all or part of their assets to nonphysician organizations with substantial financial assets. The principal options for selling their assets include selling to hospital systems and physician-practice–management companies, and making direct equity offerings to the public.

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