ACADEMIC MEDICAL CENTERS
FINDINGS

I. INTRODUCTION

The purpose of this paper is to document the trends and changes in health care delivery and managed care plans and how they have affected Academic Medical Centers (AMCs) and health professions education. While this paper focuses on the issues of physician education, the Task Force recognizes that managed care has had profound affects on how all health professionals deliver services and are, or should be, trained. The Task Force encourages the Governor and the Legislature to monitor the impacts of the changing health care system on the staffing needs, initial training, and ongoing professional development of the full spectrum of health professionals.

A. Role of Academic Medical Centers in the Health Community

California has eight allopathic medical schools and one osteopathic medical school. Five of the eight allopathic schools are part of the University of California (UC) system (UC-Davis, UC-Irvine, UC-Los Angeles, UC-San Diego, UC-San Francisco). The other three allopathic schools (Loma Linda, Stanford, and University of Southern California) and the osteopathic school (Western University of Health Sciences) are private. In the 1995-1996 academic year, the eight allopathic medical schools enrolled 4,366 medical students, and the osteopathic school enrolled 681 students. The five UC schools accounted for approximately 50% of first-year enrollees. In 1995, there were 645 allopathic residency programs in California, which enrolled a total of 8,678 residents, and slightly over half of these residents were enrolled in programs affiliated with the UC system.[1] Although a great deal of training occurs in public hospitals, due to the complexity of obtaining financial data for the various teaching institutions, the task force narrowed it scope to focus primarily on the AMC-owned, university teaching hospitals. These centers include: UCLA Medical Center, USC Medical Center, University of California at Irvine Medical Center, University of California at Davis Medical Center, Loma Linda University Medical Center, UCSD/San Diego University Medical Center, UCSD/La Jolla Thorton Hospital, Medical Center at UCSF, and Stanford University Medical Center.

[1] Coffman, Janet, M.P.P., Young, John, Vranizan, Karen M.S., Blick, Noelle, Grumbach, Kevin, M.D., "California Needs Better Medicine: Physician Supply and Medical Education in California," A Joint Publication of the California Primary Care Consortium and the UCSF Center for Health Professions, May 1997.

1. Education
One of the core missions of all AMCs is medical education and training. AMCs provide undergraduate and graduate medical training in a unique environment that brings together education with research and patient care. Although AMCs educate and train many types of health professionals, the focus of this report is on those activities that prepare individuals to practice medicine and/or conduct health-related research.

2. Research
The United States has been the world's biomedical research leader over the past half-century and is home to the world's leading experts in nearly all fields of biomedical research. The preeminence attracts scientists from around the globe to study and work at AMCs throughout the country. California's AMCs have been both world and national leaders in ground-breaking research. In addition to the improvements realized in medical care, this investment has also fueled the growth of the biotechnology, pharmaceutical, and medical equipment industries. These are exceptionally high-value-added industries, which, for that reason, make a great contribution to the growth of the California economy.

3. Clinical Care
AMCs apply leading edge technology in the treatment of disease and serve as sources of clinical innovation for the rest of the industry. They operate as "centers of excellence" providing tertiary care to a more acute patient population, as well as providing a great deal of routine care. These centers provide a disproportionate amount of care to vulnerable populations and serve as part of the societal safety net.[2]

B. Transition of System
AMCs are based in the most complex and specialized part of the delivery system. They make use of and develop the latest in medical technology, have traditionally valued the specialist over the primary care provider (PCP), and in the past their approach to the delivery of healthcare has been the least cost conscious. This orientation, if not addressed, sets them squarely on a collision course with the major transformation that is occurring in the broader healthcare system, including:

C. Concerns AMCs have related to managed care
1. AMCs fear managed care, as the agent of major payors, is not willing to pay for certain public goods produced by AMCs. Concern exists that MCOs will not pay a premium to support education or clinical research.
2. Loss of payment for services: Managed care, the more competitive environment, and reduced payments by Medicare and Medicaid, have resulted in a decrease in the prices for services paid to AMCs.
3. AMCs fear loss of volumes: Fear that lower referral rates from MCOs to AMCs for specialty care could lead to loss of revenues and patient volumes necessary to

[2] Mann, Joyce, Melnick, Glenn, Bamezai, Anil, and Zwanziger, Jack, "A Profile of Uncompensated Hospital Care, 1983-1995," *Health Affairs*, July/August, 1997.

conduct training and research, although this has not been the experience in California so far.

4. Adverse selection: Patients most likely to stay with AMCs are those most dependent on their services, which includes the indigent and those with highly unusual or costly tertiary care needs.
5. Loss of Disproportionate Share Hospital (DSH) funds: MediCal recipients are being enrolled-in managed care, and AMCs are often unable to compete for members who, for the first time, have a choice of health plan and delivery system. Enrollees may prefer to establish a relationship with a non-AMC provider, or they may choose to receive care at a facility more easily accessible. The voluntary and involuntary movement of MediCal recipients from AMCs and other traditional safety-net providers to non-safety-net providers reduces the financial resources of AMCs and other traditional safety-net providers. AMCs are concerned that the private providers may enroll the healthiest populations, leaving the sickest and most costly for the safety-net providers. Also, although recently reversed under the new Balanced Budget Act, AMCs experienced a loss of Medicare Graduate Medical Education (GME) funds when health plans received Medicare capitation payments based on a formula that included allowances for teaching hospitals, and failed to pass them through to the AMCs.

II. FINDINGS

A. Health Profession's Education

According to several leading authorities, too many specialists are being trained in California, as well as in other parts of the country.[3] Under new legislation, the Health Care Financing Administration (HCFA) is now offering incentives to AMCs to reduce their residency programs, and this appears to be desirable public policy. Although some progress has been made in California towards shifting the primary care-specialist mix, overall the change has not been substantial. Stanford maintains a 71% specialist to 29% primary care ratio with no plans to adjust in the future.[4] UC entered a voluntary agreement with the state to adjust, the mix, but progress to date has focused mainly on expanding primary care residency programs versus making the necessary offsetting reductions in specialty programs.[5] It would be beneficial if the leaders of California's AMCs would work together to develop an authoritative projection of physician personnel (and other health professionals) needs and a plan for adjusting educational programs to meet them.

Clinical education has traditionally taken place in the inpatient setting and clinics of affiliated hospitals. However, this no longer provides adequate preparation for practice

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[3] Op-Cit., "California Needs Better Medicine: Physician Supply and Medical Education in California," May 1997 and "Critical Challenges: Revitalizing the Health Professions for the Twenty-First Century," Pew Health Professions Commission, December, 1995.

[4] Interview with Ann Dohn, Director, Office of Graduate Medical Education, Stanford School of Medicine, September 1997. Notes available on request.

[5] Office of Statewide Health Planning and Development, "Comments and Recommendations on the Progress of the University of California in Meeting its Primary Care Training Goals," August 1996.

as advances in medical knowledge and improved technologies have lowered hospitalization rates, reduced lengths of stay, and shifted care to ambulatory settings (outpatient departments and physicians' offices). Also, society's need to contain the cost of medical care and to produce more primary care physicians, with a focus on population-based medicine, requires greater student exposure to physician and public health practice in community and ambulatory sites, including managed care practice settings.

Although this section focuses on graduate medical education of physicians many analogous observations would apply to the training of other health professional personnel. As the composition of non-physician health care personnel changes to reflect managed care's effort to cut costs while continuing to meet patients' medical needs, various professions will share some of the tasks that are now reserved for the physician. Training programs and demand for certain groups of health care providers, including advanced practice nurses and physician assistants have been increasing.[6] Health care employers in California have indicated that they will significantly increase the number of advanced practice nurses they employ over the next several years.[7] It will be important that educational programs, where possible, be integrated as a whole, across professional communities to prepare PCPs, nurse practitioners, and physician assistants to work together collaboratively in primary care settings. This should occur through increased sharing of clinical training resources, more cross-teaching, more exploration of the various roles played by professionals, and the active modeling of effective team integration in the delivery of efficient, high-quality care.

B. Financing and Data

An appraisal of the financial impact of managed care is made difficult by the fact that the financial data of AMCs are incomplete and uncertain, and by the fact that change has been very rapid in recent years for which published data are not yet available. Mission-based accounting systems are not in place, so it is not possible to identify and track revenues and expenses related to education, research, and clinical care. Accounting systems are not centralized, so a complete assessment of the financial performance of the medical school, hospitals, and faculty practice plans proves difficult. Data do not exist that combines information from these various entities in a useful manner, and currently there are separate surveys of medical schools, faculty practice plans, and hospitals; and it is not possible to balance the accounts between these surveys.[8] No California AMC publishes a consolidated statement of total revenues and expenses. Even within the different entities the data is often hard to understand. For example, faculty practice plan revenues have historically been unaudited and underreported, and billing systems have been maintained by individual departments.

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[6] UCSF Center for the Health Professions.

[7] California Strategic Planning Committee for Nursing, *Planning for California's Nursing Workforce*, 1996.

[8] Reuter, James, "The Financing of Academic Health Centers," Georgetown Univeristy Medical Center's Institute for Health Care Research and Policy, April 1996.

In the past, AMCs used clinical revenues generated from hospital and faculty practice plans to cross-subsidize their teaching and research missions. Revenues were generated by charging above-cost prices to insured patients. A reasonable and probable inference from the available data is that the actions of managed care, in parallel with similar actions by Medicare and Medicaid, are reducing contract rates and squeezing the net income margins of AMCs, challenging their ability to continue to finance teaching and clinical research. AMCs recognize the need to make major changes to adapt to this new environment, and are working hard to make them. In recent years, they have taken many millions of dollars out of their cost structures. So far these changes have not resulted in significant reductions of medical education, residency training, or clinical research in California. Should pressure from Medicare, Medicaid, and managed care continue, AMCs ability to cross subsidize the teaching and clinical research functions may disappear, in which case additional support would be needed. Clinical research at AMCs translates basic biomedical discoveries into effective new treatments, an important benefit to society. If this research is to be maintained at its present levels, it is probable that government will need to find another source of funds.

A major problem for managed care in California results from the fact that patients want access to costly therapies whose efficacy has not been substantiated by controlled clinical trials or other convincing evidence. In some cases, this issue becomes extremely controversial. Health plans feel themselves under pressure to pay for unproven therapies which may waste money, and even be harmful to patients. Some people take their demands to court, others to the legislature, neither of which are good forums for evaluating the efficacy of proposed treatments. New treatment modalities need to be evaluated rigorously, under carefully designed and controlled clinical trials, to establish whether they should be included in a standard of care. AMCs, in particular, have the capability to do such studies. When appropriate, managed care organizations and other payors should support such studies in order to identify which technologies do and do not contribute to patients' health.[9] (Refer to Practice of Medicine paper regarding coverage of clinical trials.)

[9] AAHP Press Release, June 30, 1997.

ACADEMIC MEDICAL CENTERS
BACKGROUND PAPER

FINANCING

Traditionally, AMCs have funded a significant portion of their missions through cross-subsidies from charging insured patients above-cost prices. That is, the affiliated hospital and faculty practice plans (FPPs) provide support for various mission related activities from the revenues they receive for providing patient care. In some cases, the support may be explicit, for example, taking the form of government payments for the salaries and fringe benefits of residents and faculty. In other instances, the support may be in forms other than cash, such as space for teaching or research laboratories. AMCs are concerned that recent demands by government, employers, and consumers to slow the growth in spending may threaten the ability of AMCs to continue to finance their missions using these traditional cross-subsidies.

No California AMC publishes a consolidated statement of total revenues and expenses. Audited California-specific data is collected for AMC hospitals by OSHPD, and is reported below. Audited data does not exist for the medical schools or the faculty practice plans for California. AMC nation-wide data is only available through 1994, however, since this time purchasers and government have become increasingly more aggressive in controlling costs, so caution should be exercised when extrapolating these findings.

Although the cost-contained environment is resulting in financial pressure on AMCs as their contract rates decline, through 1994, on a nation-wide basis these institutions found ways to manage both their revenues and expenses, to maintain if not actually improve their financial status_.. In 1994, AMC nation-wide hospitals had total margins of 3.7 percent[10]. Nation-wide their margins were higher in 1994 than in 1989. It is interesting to note that the margins of AMC hospitals in competitive markets were higher than AMC hospitals in markets with low levels of HMO penetration. This suggests that hospitals in competitive markets may be working aggressively to reduce costs in order to maintain their margins, while hospitals in less competitive markets may not yet have seen the need to do so. Average margins were 5.6 percent for UC's AMC hospitals in 1994, higher than the national average. Nation-wide data is not available beyond 1994, and the market has grown increasingly more competitive. California-specific data is however available through 1996. Through the period of 1993-1997, UC's average margins were 4.4 percent, although UC San Diego and UC Irvine hospitals lost $20 million and $14 million respectively in 1996[11]. [Note: we are awaiting OSHPD data for hospital margins for all California AMCs. In compiling our margin data, we compared the UC data submitted by the Office of President to the OSHPD data and found discrepancies in some cases. I have reflected the data provided by UC above, until we are able to resolve the differences.]

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[10] The Financing of Academic Medical Centers, Commonwealth Fund, April 4, 1996.
[11] University of California Teaching Hospitals Quarterly Report, March 31, 1997, Prepared by the Office of the Senior Vice President of Business and Finance

AMC hospitals have been able to increase their average margins by restraining the rate of growth in costs below the rate of growth in revenues. Also, during 1989-1994 Medicaid established policies for additional payments, generally referred to as Medicaid disproportionate share payments, that substantially increased Medicaid payment rates to hospitals. In addition, the maintenance of Medicare's indirect medical education (IME) payment has enabled major teaching hospitals to have higher inpatient margins on their Medicare business (15.6%) than any other group of hospitals[12]. However, The Balanced Budget Act of 1997 has put in process a substantial reduction in the subsidies for teaching purposes, which will decrease the profit margin from Medicare. Also, there is evidence that market forces are reducing margins in AMC hospitals in competitive locales. The margins of AMC hospitals in markets with high levels of HMO penetration fell from 4.6 in 1985 to 3.0 in 1993. But, it is interesting to note that, even at these reduced levels, the margins of AMC hospitals in competitive market were higher than AMC hospitals in market with low levels of HMO penetration. This suggests hospitals in competitive markets may be working aggressively to reduce costs in order to maintain their margins, while hospitals in less competitive markets may not yet have seen the need to do so.

However, some of the changes that are taking place have the potential to effect the extent to which these institutions are able to continue to perform their missions. While the number of faculty in medical schools is growing rapidly, this growth may simply be part of schools' attempts to expand their revenue base. Clinical revenues per faculty have been increasing nation-wide, supporting the hypothesis that faculty are being asked to increase their revenue-raising, clinical activities. However, there is not yet substantial evidence that this increasing dependance on faculty clinical activities is clearly effecting either the educational or research missions, although the potential exists. In addition, some of the cost cutting has resulted from significant downsizing of personnel and reduction in services, and it is not yet clear the impact this has had on the long-term health of the community.

Summary of Finances

According to the data, it appears AMCs were financially stable, at least through 1994. However, it is hard to be certain as non-existent, contradictory, fragmented, and inaccurate data tells an inconclusive story about California's AMCs. One of the most problematic parts of the data relates to the faculty practice plan revenues. The AAMC when presenting its findings on medical school financing, indicated that although FPP revenues appear to be increasing, some of the "increase" in revenues is not an increase at all, but simply more accurate capturing of clinical income. The report indicated that these revenues have historically been underreported by an amount that has in some cases been substantial. Historically, FPP data was maintained by each clinical department independently, and there was no cohesive aggregate data at any institution.

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[12] Academic Health Centers in Competitive Markets, *Health Affairs*, July/August, 1997.

Another problem with AMC data is that it is very difficult to identify revenues and expenses related to its various missions. AMCs have grown in terms of their dependence on clinical revenues, these revenues are used to cross-subsidize education, research, and care to the uninsured. In addition, funding streams coming from outside the organization are often used to support multiple missions. For example, the Medicare IME subsidy supports the indirect costs of medical education, but also helps support care to the uninsured. Funding for these missions has been implicit versus explicit, and most AMCs do not have an accurate handle on sources and uses of funds related to the various missions.

Add to this the fact that many of the funding streams that exist are not only not targeted, but contain perverse incentives. A good example of perverse incentives that were built into the system is the recently modified Medicare Graduate Medical Education (GME) funding. While there is little doubt that specialists are in oversupply, up until this year the federal government still subsidized GME with over $6.5 billion annually, most of which went to train more specialists. Then in 1996, UC, for the first time, received $50 million dollar subsidy for GME through MediCal. Until recently, many teaching hospitals have been reluctant to cut back, because every resident translates into an average Medicare GME subsidy of $100,000 a year_. "It has not been financially rewarding to downsize," said Muncey Wheby, Associate Dean for Graduate Medical Education at the University of Virginia. The new federal budget agreement has redesigned the Medicare GME subsidy, and now will pay AMCs to gradually decrease the number of young doctors they train.

Although these institutions are finding ways to manage if not actually improve their financial status, some of the changes that are taking place have the potential to effect the extent to which they are able to continue to perform their missions on the previous scale. There are several areas of particular concern that are deserving of future monitoring and research. Clinical revenues per faculty member have been increasing nation-wide, supporting the hypothesis that faculty are being asked to increase their revenue-raising, clinical activities. However, there is only very limited evidence about the impact that this increasing dependence on faculty clinical activities is having on either the quality or quantity of the educational or research missions.

Second, the public AMCs that provide a disproportionate share of uncompensated care in the state may be particularly vulnerable as a result of the mainstreaming of MediCal enrollees into managed care and a reduction in their paying patient base. Third, the position of AMC hospitals in their local markets is bad and getting worse. Other hospitals are restraining costs more effectively, widening the gap in costs per case. AMC hospitals must reverse this trend in order to attract privately insured patients.

GRADUATE MEDICAL EDUCATION AND PHYSICIAN SUPPLY

Unlimited growth in graduate medical education (GME) -- principally fueled by unrestrained federal support—has apparently led to a physician surplus. In addition, there has been a fundamental shift in the ways in which physicians are incorporated into

the system. This has restricted the employment of specialist physicians, and this rationalization will continue over the next decade. Shortages of physicians persist in inner-city and rural areas, and there are limited training settings available in these areas for residents.

Regardless of the financing system in place, a real public policy issue exists in terms of physician oversupply. The Taskforce's Health Industry Profile report presents the comprehensive statistics in regards to physician supply, and some of the key findings, prepared with the assistance of the UCSF Center for Health Professions, are summarized below[13]:

- California has more than an adequate supply of physicians
- Patient care physicians are poorly distributed across the state, excess supply in some regions accompanies shortages in others
- California has more specialists than it requires
- Most regions in California have inadequate to barely adequate supplies of primary care physicians
- Curriculum design does not focus on managed care and integrated settings nor on team training and cross-professional education

As stated earlier, Medicare GME has recently been reformulated to pay AMCs to downsize their recidency training programs. However, even before implementation of this program, JAMA's annual survey of GME programs showed a reduction in the numbers of first-year residents in most major specialities and subspecialties[14]. Minor reductions were initially noticed last year; but by 1997 the decreases were significant. Nearly all the specialty residency programs that had difficulty placing their graduates for two consecutive years reported at least 10% fewer first-year residents than in 1994. More importantly, disciplines without employment difficulties also reported downsizing, perhaps in anticipation of reductions in federal funding sources.

Competition for primary care doctors by health service plans has led to increased wages in the field, and to a narrowing of the income differential between specialists and primary care in California. Consolidation has also resulted in downsizing of speciality units. Specialists are suddenly having a hard time finding jobs, and the word is filtering down. In 1994, ten of twelve graduating anesthesiologists at UC Davis were unable to find jobs in California[15].

But the needs of patients aren't the only factor contributing to the shift in California's residency programs. In an agreement between the Governor, the legislature, and the University of California, signed in May of 1994, UC agreed to develop a plan for increasing the emphasis on, and resources dedicated to, the training of primary care

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[13] California Needs Better Medicine: Physician Supply and Medical Education in California, A Joint Publication of the California Primary Care Consortium and the UCSF Center for Health Professions.
[14] US Graduate Medical Education, 1996-1997.
[15] *Health Affairs*, Spring 1996.

physicians, and the offsetting reductions that need to occur in speciality programs as well. Collectively, these changes are expected to shift, by the academic year 2001-2002, the University's system-wide distribution of primary care and specialists to 53.5% and 46.5% respectively[16]. In addition to working with the AMCs, the state has passed legislation favoring the expansion of primary care. In 1993-94 the legislature passed a bill that required physicians to complete a family practice clerkship in order to receive a California license.

However, neither the government nor the market seem to be able to reduce the problem of geographic maldistribution significantly. The thought has been that if AMCs train more primary care providers, they will "trickle down" into rural areas and underserved urban areas once the market is saturated. Unfortunately this does not seem to be happening. The number of communities designated by the federal government as health profession shortage areas rose sharply through 1995[17]. In California, the federal government has designated that 124 inner-city and rural areas across the state have shortages of generalists.

In regards to curriculum, simultaneously, both young physicians and industry leaders report that the current system of medical education is not preparing graduates for this new practice environment[18]. Managers of HMOs estimate it takes 1 to 2 years of additional experience to prepare graduates of US residencies for practice in a managed care environment[19]. Some HMOs, such as Boston's Tufts Associated Health Plan, have gone so far as to create their own training institutes. Educational programs are not current in terms of focusing on intensively managed and integrated settings or team training.

RESEARCH

Many are concerned that serious challenges to continued rapid progress currently face the research enterprise. The most serious threat comes from the possibility of simultaneous reductions in all of the revenue streams that have traditionally been provided in support of biomedical research. Efforts to balance the federal budget, strategies to contain prices in the healthcare marketplace, and increased price competition in the pharmaceutical industry all threaten the availability of funds for biomedical studies, which includes both basic and clinical research studies. Clinical research is likely to witness the greatest detrimental impact from these converging forces. This is due to the fact that clinical research has been more dependent in the past on cross-subsidies from health care revenues, some clinical research participants are shifting away from traditional centers of research activities (AMCs) to managed care, and basic researchers have been more successful in garnering federal support than have

[16] Memorandum of Understanding Between UC and OSHPD, 1993.
[17] Laboratories and the Health Care Marketplace: The Limits of State Workforce Policy, Journal of Health Politics, Policy, and Law, June 1997.
[18] Medical Student Education in Managed Care Settings, JAMA, September 4, 1996.
[19] Educating Physicians for the Real World, Shine.

clinical researchers. By recent estimates, only 10-15% of NIH funds are currently allocated to support clinical research[20].

As one of the tools being used by government, employers, and consumers to control costs, the impact of managed care on clinical research has been a topic of concern, not only from a financial perspective, but also in terms of its potential to impact the research agenda pursued by investigators and research subject availability. The table below outlines some of the primary issues identified with managed care:

Utilization Review
- Reduced length of stay
- Limitation of coverage for diagnostic tests
- More stringent limitations or denial of coverage for experimental treatments

Selective Contracting
- Reduced patient flow if AMC not in network

Primary Care Gatekeeper
- Reduced patient flow to specialists

Payment Rate Negotiation
- Funding streams directly tied to clinical revenues, and ability to cost-shift no longer possible
- Pressure on physicians to increase productivity leads to less time for clinical research

Two studies recently published in JAMA attempt to measure several of the perceived problems mentioned above. The results of the first study indicate that faculty research, clinical activities, and perceptions of departmental climate were significantly related to the competitiveness of local markets. The study found that in competitive markets the rate of publication for clinical researchers decreased, the percentage of young faculty with patient care responsibilities was greater, and lower levels of departmental cooperation were perceived by faculty. However, the study also stated that the percentage of senior faculty with patient care responsibilities remained the same, and that there were no significant differences in the amount of faculty-student contact by market stage[21]. The second study, provides evidence of an inverse relationship between growth in NIH awards to clinical departments and managed care penetration among AMCs[22]. Whether this association is causal remains to be determined. However, this study was criticized as being misleading by the AAHP because the authors did not investigate whether the slowed growth reflects changing national research priorities or if awards were going to other institutions in those communities.

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[20] Report to the NIH Board: Biomedical Research Policy, June 1997
[21] Relationship Between Market Competition and the Activities and Attitudes of Medical School Faculty, *JAMA*, July 16 1997.
[22] Relationship Between NIH Awards to US Medical Schools and Managed Care Market Penetration

Although the limited studies and current trends prompt concern that clinical research may face difficulties in the future, no evidence collected through 1995 clearly demonstrates that the observed changes in healthcare financing are having a significant impact on activity in this area. (However, as noted earlier, this situation is changing rapidly and to some in AMCs, 1995 appears to be a long time ago.) This sentiment was also echoed by clinical researchers in a recent study prepared by Lewin to identify the impact of managed care features on clinical research. In a series of site visits and interviews with clinical researchers at several research-intensive AMCs, including those in California, it was determined that managed care has had limited impact on clinical research through 1995[23]. The level of research had not decreased, nor had UR procedures had a significant impact on patient availability for clinical protocols. Also, in practice, many MCOs exhibit substantial flexibility about covering experimental therapies or paying for patients enrolled in clinical trials[24]. Although, again, researchers expressed concern about what the future might hold based on their observations about managed care.

Although it is likely true that the ability to cross-subsidize clinical research through clinical revenues will be adversely impacted, observable events and trends do not support some of the concerns expressed above and identify opportunities for improved performance in the clinical research area. In particular, several California AMCs have experienced increased patient volumes, as many community hospitals have discontinued provision of more complex and costly services[25]. The MEDSTAT Group Analysis, commissioned by the AAHP, confirmed that capitated plan members are cared for in major teaching hospitals, overall capitated plans admitted a higher percent of total admission to major teaching facilities and a lower percent of admission to non-teaching facilities when compared to FFS plans in 1994[26]. Furthermore, capitated plans do pay such hospitals more than they pay non-teaching facilities which might be explained as a reflection of the market power of AMCs that managed care plans need to include in their networks or as a reflection of the higher costs associated with teaching and uncompensated care[27]. Some AMC administrators have reported that the high name recognition and status of their institutions may be worth 5-10 percent higher fees from managed care plans[28].

In addition, one of the most important developments related to support for clinical research occurred in June of this year when the American Association of Health Plans' (AAHP) Board voted to establish an industry-wide relationship with the NIH to increase

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[23] The Impact of Managed Care on Clinical Research: A Preliminary Investigation, Lewin-VHI, Inc., January 1996.
[24] The Impact of Managed Care on Clinical Research, National Center for Research Resources, January 1996.
[25] Interview UC Office of the President and Stanford Office of the CFO.
[26] Revised Study Confirms that Health Plans Make Higher Payments to Teaching Hospitals, MEDSTAT Group Analysis, AAHP, June 1997.

[27] Revised Study Confirms that Health Plans Make Higher Payments to Teaching Hospitals, MEDSTAT Group Analysis, AAHP, June 1997.
[28] Academic Health Centers in a Changing Health Care Environment, Health Affairs, July/August 1997.

opportunities for health plans and their enrollees to take part in clinical research and to contribute to a national dialogue about health research needs[29]. The AAHP stated that it supports patients having access to NIH-approved clinical studies and supports individual health plans' linkages with NIH-sponsored clinical trials. The AAHP board believes participation in research offers the following opportunities: improving the quality, feasibility, and relevance of research by including a larger number of health plan enrollees, increasing choice available to enrollees to participate in studies of innovations in care, and strengthening existing relationship and establishing new partnerships with institutions involved in clinical research, such as AMCs. Currently, MCOs produce, sponsor and serve as partners in a variety of clinical research projects. For instance, a consortium of ten not-for-profit health plans supports studies ranging from the mechanisms of disease to the impact of service delivery on treatment outcomes[30].

Finally, proponents of managed care have argued that managed care has had a very positive impact in terms of creating a broader, more health-focused and cost-benefit based research agenda. Managed care organizations provide a focus on maintaining health and preventing disease, this perspective has encouraged others in the medical community to examine these issues, which are important not only to cost containment, but also to the overall health of the nation.

CLINICAL CARE FOR UNINSURED POPULATIONS

AMCs' main concerns about a more competitive health industry regarding the uninsured, under-insured and low-income people who have limited access to healthcare services are related to funding and resident services. As with the other missions, a key form of support of the cost of care to vulnerable populations by AMCs has been through cost-shifting from private payors. Government price controls through Medicare and MediCaid and managed care eliminate the ability to do this. In addition, teaching hospitals rely on residents services and more importantly, on the GME subsidy that accompanies the residents, to cross-subsidize healthcare to this population. With the pressure to reduce the residency positions at AMCs, this funding source is in jeopardy as well. These are some of the major contributing factors that are threatening the safety-net teaching hospitals such as U.C. Irvine and U.C. Sand Diego and explain the losses in 1996.

Results of the RAND study on uncompensated care suggest that much of the uncompensated care burden in California is concentrated within urban public hospitals and major public teaching hospitals[31]. Major public teaching hospitals provide triple the amount of uncompensated care relative to their share of the overall hospital market. Some AMCs which serve a large share of the Medicaid population, have absorbed an even bigger share of the uncompensated care burden in recent years. The implications are serious for MediCal recipients being shifted into managed-care settings. HMOs serving MediCal patients are ratcheting down hospital payment rates and utilization, and

[29] AAHP Press Release, June 30, 1997.
[30] Interim Report of the NIH Director's Panel on Clinical Research, December 1996.
[31] A Profile of Uncompensated Hospital Care, 1983-1995, RAND.

the mainstreaming of Medicaid recipients is reducing the paying patient base of traditional indigent care providers, leaving them without a common source of funds used to support uncompensated care.

However, while California public AMCs do provide a disproportionate amount of care to the vulnerable relative to other providers, they also receive a significant share of the funding to support this activity. While true that payor rates are declining and that for some AMCs the proportion of uninsured is growing as MediCal patients are being shifted away, teaching hospitals are the only organizations currently that receive IME payments from Medicare and MediCaid. While the IME label has led many to believe that this adjustment compensates hospitals solely for graduate medical education, its purpose is much broader and includes transfers for care for the uninsured. Also, two-thirds of DSH payments are awarded to teaching hospitals[32]. This funding may be justified to some degree based on the fact that these centers do serve such a large proportion of uninsured, and often provide specialized services for severely ill patients not available elsewhere in the community.

[32] Ralph W. Muller, Chair-Elect of the Council of Teaching Hospitals and Health Systems of the AAMC in testimony before the Senate Committee on Finance.