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The emergence of market competition in the U.S. health care system.* Its causes, likely structure, and implications

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Summary

This paper addresses three issues. First, why did market competition emerge in the U.S. health care system? Second, once free of regulatory constraints, how is the structure of the medical care system likely to evolve? Three, what are the implications of market competition for the public as well as for providers? The medical system in the U.S. was highly regulated and conventional wisdom assumed a continuation of these trends. Further, the economic motivation of existing providers was to maintain the status quo; market competition threatens their economic well being. Market competition was primarily a result of private sector forces. Several actions by the government, both intentional and unintentional, aided these private forces. Second, economies of scale and consumer preferences for different delivery systems appear to be important determinants of the new market structure. Lastly, market competition is forcing a redistribution of incomes, both between providers as well as between providers and taxpayers. There is also increasing concern over the plight of the medically indigent, as inadequate government payments become more obvious in a price competitive system.

market competition; regulation; equity

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I. Introduction

In the last five years the delivery of medical services in the United States has changed dramatically. Rather than moving in the direction of increased regulation, market competition has now become the dominant force affecting hospitals and health professionals.

For-profit hospital chains have purchased University teaching hospitals. Hospitals are advertising and health professionals are taking short courses on how to market their practices. Hospitals are experiencing dramatic declines in their occupancy and the number of hospital mergers are increasing. After years of concern over shortages of physicians, dentists, and nurses, hospitals are laying off nurses and there is concern that current surpluses of health professionals will continue for the next 20 years. These changes were not anticipated.

The purpose of this paper is to address three questions:

1. Why did these changes occur? The U.S. health care system was highly regulated and conventional wisdom assumed a continuation of these trends. The change from regulation to market competition is also of academic interest [1]. The economic motivation of existing providers was to maintain the status quo; market competition threatens their economic well being. In such circumstances change is unlikely to occur.

2. Once free of regulatory constraints, how is the structure of the medical care system in the U.S. likely to evolve?

3. What are the implications of market competition for the public, as well as for providers?

The following is a brief overview of the paper.

The emergence of market competition was primarily a result of private sector forces. However, several actions by the government, both intentional and unintentional, aided the movement toward competition. Second, innovations in the medical care delivery system are still occurring and it is too early to say what the structure of the medical care system will look like in 10 years. However, consumer preferences for different delivery systems and large economies of scale appear to be important determinants of this evolving structure. Lastly, market competition is forcing a redistribution of incomes, both between providers as well as between providers and taxpayers. There is also increasing concern over the plight of the medically indigent, as inadequate government payments become more obvious in a price competitive system.

II. The U.S. medical system before market competition

A. The goal of increased access to medical care

In 1966 the Medicare and Medicaid programs started. Medicare is a federal program to finance the medical costs of the elderly. The benefits and beneficiaries are well defined. Under Medicaid the individual states determine the benefits and the eligibility requirements for those considered to be medically indigent. The federal government assists the states in paying for programs to the medically indigent.

To ensure that hospitals and physicians participated in these public programs, the federal and state governments paid hospitals according to their costs (plus 2 percent under Medicare) and paid physicians fee-for-service according to their usual and customary fees.

As a result of Medicare and Medicaid, the aged and the medically indigent increased their use of hospitals and physicians [2].

The private sector at this time was also increasing demand for medical services. The U.S. economy was growing and unions bargained for increased health benefits. (Most private health insurance is provided through the workplace thereby decreasing the concern with adverse selection.) In the late 1960s inflation began increasing as the Johnson Administration decided to finance the Vietnam War in as indirect a manner as possible.

Inflation served to further stimulate the demand for health insurance. Incomes increased because of inflation and people moved into higher income tax brackets. Employees preferred to receive health insurance as a fringe benefit, since fringe benefits were not taxed. The tax advantages of having the employer purchase health insurance increased as the employees' income rose and they moved into higher marginal tax brackets.

As insurance coverage in the private sector increased, concern with health care costs diminished. Further, there was only limited competition among third party payers in the private sector. The Blues received a competitive advantage over the commercials in that they received large discounts from the hospitals (which provided their initial capital and controlled them). Also certain unions, such as the United Automobile Workers, would not contract with commercial insurers.

With the increase in insurance coverage, from both the private and government sectors, an "erosion of the medical marketplace" began [3]. Out-of-pocket medical prices diminished and providers were able to sharply increase their prices with little fear of diminished demand. Health insurance premiums increased. Unions, however, were able to pass these increased costs on to the employer and were able to still bargain for additional benefits. With a growing economy and increased inflation, it was possible for business firms to increase the prices of their goods and services.

There was a great deal of satisfaction with the health care system during this period. The aged and the poor received increased access to mainstream medical care. The Congress always voted in favor of increased health expenditures, for medical research, for increased benefits under Medicare, inclusion of new beneficiary groups under Medicare, and for expansion of health manpower training programs. Expansion of health programs was politically popular.

During this period, physicians had the medical responsibility for the care of their patients, but not the fiscal responsibility. Each provider was paid separately. Physicians had the financial incentive to provide more services since they were paid fee-for-service. Hospitals were reimbursed, for the most part, according to their costs and their incentive was to expand their services so as to emulate large teaching institutions. Hospitals competed, but it was for physicians and prestige. There was little insurance coverage for out-of-hospital services.

The determinants of market structure were provider preferences and regulation.

Small and large hospitals with little used facilities and services were able to survive and even grow. Physicians were able to remain as solo practitioners or join groups according to their preferences. State Practice Acts placed limits on the tasks permitted to different health professions. Advertising was considered to be unethical and banned by medical societies or incorporated into the Practice Acts, as were sanctions on fee-splitting and prohibitions against the corporate practice of medicine, e.g., prepaid health plans.

B. The pressures for change

The large increases in demand from both the public and private sectors together with the declining portion of the bill paid for by the patient led to rapidly rising prices and expenditures for medical services. Those services most covered by insurance coverage, such as hospital care, increased most rapidly. Out-of-pocket payments by the public for all medical services declined from 52% in 1965 to 27% in 1984 [4]. For hospital care the decline in the portion of the bill paid out-of-pocket was even greater, falling to less than 10%.

The consequence was that federal expenditures increased from an annual rate of $3.6 billion in 1965 to $31.4 billion by 1975 and to more than $100 billion by 1984. State expenditures under Medicaid also increased sharply, from $4.3 billion in 1965 to $35 billion in 1984. While expenditures in the private sector went from $28 billion a year in 1965 to $210 billion by 1984, the more rapid increase in public expenditures (federal and state) increased the overall portion of the health sector that was paid for by public funds, from 22% in 1965 to 40% in 1984 [5].

These massive increases in health expenditures from both the public and private sectors greatly exceeded the economy's rate of inflation. Health care, as percentage of GNP went from 5.2% in 1965 to 10% in 1984. These expenditures were equivalent to a huge redistribution program, from the taxpayers to those working in the health sector.

Early attempts at reducing the rise in health expenditures came from the federal government. Original expectations were that Medicare would cost only $2 billion a year. However, Medicare was an entitlement program, as such its benefits and beneficiaries were defined by law. It was considered politically impossible to ask Congress to change the law. That meant the federal government had only two alternatives for limiting the increase in its expenditures, which were rising by approximately 15% a year, increase taxes or limit payments to providers.

The federal government started chipping away at the cost based reimbursement of hospitals in 1969, when it removed the 2% from the cost plus 2%. In 1971, because of rising inflation, President Nixon placed the entire U.S. economy under a wage and price freeze (the Economic Stabilization Program). The rest of the economy was removed from this freeze within one year, however, it remained in effect for the health sector until April 1974. Once it was removed, physician and hospital expenditures increased very rapidly, 17.5% and 19.4%, respectively [6].

Additional regulatory methods were tried to limit these rapid expenditure increases. Each one failed. Physician fee increases under Medicare were limited by the Medicare Fee Index; the result was that increasing numbers of physicians declined to participate

in the Medicare program while other physicians charged for additional services, thereby negating the effect of the fee freeze. Congress passed the National Health Planning and Resources Development Act in 1974 (CON) which placed limits on hospitals' capital expenditures. Studies have since shown what many people expected, namely that the CON legislation had no effect on decreasing the rate of increase in hospital expenditures [7]. Utilization review programs (Professional Standard Review Organizations) were passed by the Congress in 1972. Again empirical studies failed to find significant savings in hospital use or expenditures as a result of these programs [8].

Similar approaches were also tried by state governments to reduce their expenditures under Medicaid, and with similar results.

In 1979 President Carter made hospital cost containment his highest legislative priority. His proposed legislation would have placed limits on the annual percent increase in hospital expenditures. The regulatory approach moved from the use of indirect methods, such as limits on capital expenditures (CON) and utilization (PSROs), to placing direct controls on hospital expenditures.

President Carter suffered an important legislative defeat. The proposed cost containment legislation was too direct a threat to hospitals' goals and revenues. Previous regulation, such as CON, was not only ineffective in preventing hospitals from expanding but it was also used to protect those same hospitals from competition [9]. Hospitals and the American Medical Association were instrumental in defeating President Carter's cost containment legislation [10]. At this point federal efforts to control the rise in federal health expenditures were stymied.

Meanwhile a number of states began implementing their own rate review programs. These programs were, in many cases, assisted in the implementation and design by the state hospital associations themselves. Rather than have stringent rate controls imposed at the federal level, many hospital spokesmen believed that their influence would be greater at the state level and that the resulting type of rate review program would be more considerate of individual hospital differences [11].

By the late 1970s, it appeared that pressures to contain the rise in health expenditures would result in increased regulation. Rather than eliminate previous regulation as it proved ineffective, such as CON, additional regulations were proposed. Hospitals were to be subject to controls on their use, on their capital and operating expenditures, as well as on entry into each hospital's market. Hospitals began to be talked about as though they were "public utilities" [12].

III. The emergence of market competition

There were a number of events that provided the preconditions for market competition but only one that made it possible to occur.

A. Federal initiatives

1. The increased supply of physicians For approximately 15 years, through the 1950s and early 1960s, the supply of physicians in relation to the population

remained constant, at 141 physicians per 100 000. During this period physicians' incomes were rising (relative to those of other occupations) as were the number of applicants to acceptances to medical schools. As the demand for physician's services continued to grow, stimulated by the passage of Medicare and Medicaid and the growth of private health insurance, an increased number of foreign medical graduates (FMGs) came to the U.S.

During this period there was constant talk of a shortage of physicians. There were many qualified U.S. students who could not gain admission to the limited number of medical school spaces who then went overseas to receive a medical education. There was great concern by middle class families that their sons and daughters could not become physicians while there was increased immigration by FMGs. The Congress responded to these constituent pressures and passed the Health Professions Educational Assistance Act (HPEA). In reference to the reasons for the passage of the HPEA in 1963 Senator Yarborough stated, "It was when we were trying to give more American boys and girls a chance for a medical education, so that we would not have to drain the help of other foreign countries" [14]. And again, "To me it is just shocking that we do not give American boys and girls a chance to obtain a medical education so that they can serve their own people". It took a number of years before the full magnitude of this Act took effect. New medical schools were built and existing medical schools increased their spaces. (The same occurred for other health professions.)

By 1980 the supply of physicians had reached 199 per 100 000, almost a 50% increase from the early 1960s. It is expected that by 1990 the supply of physicians will increase by a further 30%.

Contrary to what many persons believed, the market for physicians does follow the laws of supply and demand. With the rapid increase in the supply of physicians, there has been a decrease in the number of visits per physician, real physician incomes have been declining over the past 5 years, there has been an increase in the number of physicians accepting Medicare assignment, and more physicians are locating in areas previously short of physicians.

In response to their constituent interests and over the objections of the American Medical Association, Congress enacted legislation which eventually created excess capacity among physicians. It was not Congress' intention to create competition among physicians. However, their actions in passing the HPEA set the stage for it.

2. Cost containment legislation There was beginning to be a recognition in Congress that something had to be done to halt the rise in federal health expenditures, if for no other reason than Congress might be forced to raise taxes or impose costs on the beneficiaries of Medicare and Medicaid. Some of the opponents of President Carter's cost containment legislation, such as Rep. Gephardt and Stockman, began to propose an alternative approach, the use of market competition. Various academicians also wrote on the virtues of competition. Health interest groups, however, such as the AMA, opposed all of the competitive approaches.

The Congress did move slightly in the direction of competition. In 1979 Congress amended the CON legislation so that the Act should not be used to inhibit competition [15]. (Many states, however, still use CON in an anti-competitive manner, denying

entry by free standing surgi-centers and attempting to reduce the bed capacity of small lower cost hospitals.) [16].

When Congress passed the HMO Act in 1973, it included two provisions helpful to the development of HMOs and one that was a hindrance. Employers with 25 or more employees had to offer their employees an HMO option if there was a federally qualified HMO available in their area. Second, federally qualified HMOs were exempt from restrictive state practices. A reason often mentioned by survey respondents for not choosing an HMO is that there was a lack of information about how such an organization delivers care. Mandating an HMO option through the workplace enables a federally qualified HMO to provide this information in a low cost manner [17].

In the initial HMO legislation, federally qualified HMOs were required to offer a set of benefits that generally exceeded the benefits offered by their competition, the traditional plans. As a result of this requirement, few HMOs opted to become federally qualified. This restriction was eased in subsequent amendments to the HMO Act.

HMOs initially had a small competitive effect. They represented a small percentage of the market and there was limited premium competition. HMOs generally set their premium equal to that of the traditional plan and tried to attract subscribers by offering additional benefits. Without premium competition, however, employers did not save money when their employees joined the HMO. However, as the market share of HMOs increased, the decreased hospital use of their subscribers added to hospitals' excess capacity.

Except for the change in the CON legislation and the enactment of the HMO Act and its amendments, it was difficult for Congress to develop a consensus with the various health interest groups as to what legislative approach, if any, should be proposed to resolve the problem of rising federal health expenditures.

It was not until several years later, under President Reagan, that additional cost containment legislation was enacted. In 1981 Congress amended the Medicaid Act [18] to permit states greater flexibility in how they pay for their medically indigent. States were no longer required to offer their medically indigent "free choice" of medical provider. This meant that states could now contract with selected providers for the care of their medically indigent. While a potentially powerful force for using market forces in the Medicaid program, many states moved slowly.

Then, early in the Reagan Administration, a revolutionary method was introduced to pay hospitals under Medicare. The hospitals and medical associations were powerless to prevent a Republican Administration from reducing federal expenditures on hospitals.

Payment of hospitals according to Diagnostic Related Groupings (DRGs) was phased in over a 4-year period starting in September 1983. Hospitals were now paid a fixed price per admission for the care of their Medicare patients. The incentives facing hospitals changed. It was now in the economic interest of hospitals to provide less rather than more services. Lengths of stay for the elderly began to decline. Medicare patients, who now represented approximately 40% of the hospitals' patient days, began to be discharged earlier from the hospital. From September 1982 to September 1983 Medicare patient days increased 2.0%. In the following year, 1983–1984, Medicare patient days decreased 8.9%. The decrease in patient days was getting larger since in the last quarter of that year the decline was 13.0% [19].

However, by the time hospitals began to experience the impact of DRGs on their occupancy rates, the move toward market competition had already started. DRGs reinforced the competitive pressures on hospitals stimulated several years earlier by declining occupancy rates.

B. Private sector initiatives

Approximately two-thirds of the population are in the private sector; and most private health insurance is purchased through the workplace. The stimulus for competition started in the private sector.

In 1981 private industry was faced with a severe recession. In addition, import competition from foreign producers increased, particularly for automobiles and steel. The recession led to unemployment, loss of income, a decrease in health insurance benefits, and a decline in elective hospital admissions. The recession also led to lower tax revenues for states. As a consequence many states cut back on their Medicaid benefits, decreased the numbers of eligibles, and instituted cost containment measures, such as prior authorization for admission. A decline in the hospital admission rate for those under 65 years of age started in late 1981.

Once the recession was over, business was still concerned with its labor costs. The strength of the U.S. dollar relative to other currencies forced business to reduce its costs wherever possible to remain competitive. Thus the decline in the admission rate continued. From being relatively stable, the admission rate for those under 65 years of age declined 2.5% from September 1982 to September 1983. Then from September 1983 to September 1984 the decline in the admission rate increased to 4.5%. Since length of stay also declined, the decrease in patient days over those 2 years was 4.0% and 7.9%, respectively [20].

As industry attempted to reduce its labor costs, health insurance benefits came under greater scrutiny. Industry placed greater pressure on health insurers and an increasing number of firms started their own self insurance plans. The firms believed that they, rather than insurance companies, would be better able to control their employees' health care use. Other firms joined Health Care Coalitions in their area. These coalitions collected data on the use rates and charges of different providers to determine those providers who were most costly. Businesses also started to impose deductibles and coinsurance on their employees, thereby increasing their employees' price sensitivity. A survey of 1185 companies found that the percentage of firms requiring deductible payments for their employees' inpatient care rose from 30% in 1982 to 63% in 1984 [21].

One of the most important changes firms (or insurance companies on their behalf) introduced was benefit redesign. Insurance coverage for lower cost substitutes to hospitals was introduced. Previously, even though it was less costly to perform surgery in an outpatient setting, if this service was not covered by insurance then it became less costly *to the employee* to have the surgery performed in a hospital.

Private sector initiatives had two effects. First, as purchasers of health care benefits they demonstrated that they were concerned with health care costs. This price incentive on the demand side of the market was transmitted to the health insurers. Insurers

became more concerned with utilization review of providers. Pre-authorization for admission, concurrent review, and second opinions for surgery were instituted as a means of reducing the insurance premium. Insurers, particularly the Blues, began to change their relationship with providers and became more adversarial. They began to place greater pressure on hospitals to limit their cost increases. As competition among insurers increased, so did the type of plans that they offered. Insurers began to form Preferred Provider Organizations (PPOs) and Health Maintenance Organizations (HMOs). PPOs and HMOs restricted employees' choice of provider in return for either increased benefits or lower insurance premiums.

The second consequence of the changes in the private sector was that hospitals developed excess capacity. The efforts to reduce hospital utilization, such as utilization controls, the growth of HMOs, and coverage of care in non-hospital settings were succeeding. The occupancy rates in non-federal, non-profit, short term general hospitals declined from 78.2% in 1980 to 67.7% for the year ending September 1984. The trend is continuing down as evidenced by the occupancy rate for the month of September, which was 64.1% [22]. As excess capacity increased, hospitals became involved with HMOs and PPOs. Subscribers to HMOs and PPOs were locked in to those providers. Providers not participating in those organizational arrangements only had access to a declining population base. With increasing excess capacity, hospitals began forming their own PPOs and joining HMOs.

Traditional forms of market competition soon started, such as hospital discounts to HMOs, PPOs offering businesses lower prices, and advertising by providers as well as by HMOs and insurers.

The change by Medicare to paying hospitals by DRGs, and private contracting by Medicaid, reinforced the incentives facing hospitals in the private sector. The pressure on hospitals to compete increased as the utilization by the elderly and the poor declined.

C. The enforcement of anti-trust laws to the health sector

Increased concern by business with their employees' health care costs and the creation of excess capacity among physicians and hospitals were important pre-conditions for competition. However, had it not been for the application of the anti-trust laws, it is unlikely that market competition would have occurred.

CON legislation had encouraged anti-competitive behavior. Planning agencies, by attempting to eliminate duplication of hospital facilities and equipment, created monopoly power. Medical societies and State Practice Acts inhibited market competition by limiting advertising, fee-splitting, corporate practice, and delegation of tasks. Blue Cross and Blue Shield maintained the principle of "free choice" of provider; that is, their subscribers had no incentive to choose between providers on the basis of price. Blue Cross enrollees had a Service Benefit policy. Regardless of whether the participating hospital had high or low costs, Blue Cross paid 100% of those costs. Under Blue Shield, price comparisons by enrollees were also discouraged; Blue Shield reimbursed participating physicians in full according to their usual fees.

Up until 1975 there was the belief that the anti-trust laws did not apply to "learned

professions" such as the health professions. In 1975 the U.S. Supreme Court decided the case of Goldberg vs. Virginia State Bar. The local Bar association, believing that lawyers were not engaged in "trade or commerce", established a minimum fee schedule for lawyers. The Supreme Court ruled against any sweeping exclusion for the learned professions. In another important precedent, the Supreme Court in 1978 ruled against The National Society of Professional Engineers. The Court denied the use of anti-competitive behavior even if it represented a threat to either the profession's ethics or to public safety. Encouraged by the Supreme Court decisions, the Federal Trade Association (FTC) began to vigorously enforce the anti-trust laws in the health field. The FTC, in 1975, charged the American Medical Association and its constituent medical societies with anti-competitive behavior. In a 1978 decision, the FTC prevailed. The AMA then appealed to the Supreme Court. The FTC again prevailed in the Court's decision, rendered in 1982.

The Supreme Court's decision was a clear signal to health providers that they would now be subject to the anti-trust laws.

The AMA and other professional associations made one last attempt to escape the jurisdiction of the FTC. The AMA led a lobbying effort in Congress to exempt state regulated professions from the jurisdiction of the FTC. It was reported by one AMA lobbyist that this fight was the most important issue to the AMA since its fight against Medicare in 1965 [23].

The AMA was able to gather 219 co-sponsors to their bill in the House of Representatives placing a moratorium on the FTC's jurisdiction. The AMA stated position was "The standards of quality established by the American Medical Association and other medical societies ... are being undermined by a federal agency that possesses no medical qualifications" [24]. The AMA was further concerned that they have to spend large sums of money defending themselves when those funds could be better spent on public interest functions.

The AMA was successful in the House but was defeated in the U.S. Senate. It is useful to review the reasons for the AMA's defeat because it was contrary to expectations. Previously, the AMA had been very successful at both the federal and state legislatures; the AMA and its state societies had been (and still are) the largest contributor by a health association to legislators [25].

Although the AMA attempted to portray the legislation as one of preventing the FTC from "meddling" in quality of medical care, it was quickly viewed by others as being in the self interest of its proponents. While lawyers would also have been one of the state regulated professions exempted from the FTC's jurisdiction, the "... American Bar Association's anti-trust section urged lawyers to oppose exemption, calling it a special-interest ploy that would injure consumers" [26]. Still others said that the AMA was more interested in placing the economic health of its members above the nation's physical health [27]. The press also began to pick up the story. An analysis of campaign contributions by health PACs prepared by Congress Watch stimulated new articles, editorials around the country, and a commentary by Bill Moyers on the CBS Evening News (May 18, 1982). The opponents of the legislation were able to generate "... the rarest of political weapons – public opinion" [28]. Legislators became wary of supporting what was being seen by the public as special interest legislation.

Other organizations also opposed the AMA and the bill's proponents. The Washington Businessmen's Group on Health, which represents nearly 200 of the Fortune 500 companies, believed the legislation would increase the cost of their employees' health insurance. After a recent event, the American Nurses Association decided it wanted the FTC's protection. Under the pressure of local medical societies, certain rural clinics, where nurse practitioners were working under the supervision of physicians, were closed when the insurance companies revoked the malpractice insurance of the participating physicians [29]. These and more than 30 other organizations formed a coalition to defeat the bill restricting the FTC. They stimulated grass roots support through TV programs, newspaper editorials, and articles on the Ed–Op pages.

Despite the above publicity and grass roots pressure, the bill passed by a large margin in the House of Representatives, 245/155. Apparently, Congressmen's continual needs for campaign contributions carried the day for the bill's proponents. Members of the Senate, however, do not run for re-election every 2 years and are therefore more independent. The bill was defeated in the Senate, 59/37.

No longer could professional associations inhibit competition. The FTC was able to bring suit to prevent physician and dentist boycotts against insurers (Michigan State Medical Society and the Indiana Federation of Dentists), prevent physicians from denying hospital privileges to physicians participating in prepaid health plans (Forbes Health System Medical Staff), enabled advertising to be used (FTC vs. AMA), opposed the per se rule against exclusive contracts (Hyde Case), and enabled Preferred Provider Organizations and HMOs to compete [30].

D. Summary of reasons for the emergence of market forces

As a result of the 1981 recession and severe import competition, business became more concerned with the cost of their employees' health insurance premiums. This pressure by business to hold down the rising cost of insurance premiums created the necessary incentives for insurance companies to provide changes in their benefit packages. Low cost substitutes to hospital care, increased cost sharing by employees, and the use of HMOs and PPOs, resulted in lower admissions rates and lengths of stay in hospitals. Businesses, and insurance companies responding to their demands, became more price conscious and concerned with decreasing use of the most costly component of health care, the hospital.

HMOs, which for years were unable to attract sufficient numbers of physicians, now found it easier as a result of the increased supply of physicians. HMOs also found it easier to market their services as companies offered their employees dual choice options. Providers, such as physicians, formed their own prepaid health plans (IPAs) to prevent being limited to a shrinking fee-for-service market. Insurance companies started to form their own prepaid plans and PPOs as they saw the market for these plans increasing.

Hospital occupancy rates declined as a result of these measures by the private sector. When DRGs were instituted, occupancy rates declined still further. To survive hospitals had to compete for shares in a declining market. Hospitals also had to seek new sources of revenue. The effect was that hospitals had to become part of PPOs and

HMOs for fear of being excluded from these markets. They also offered discounts to larger purchasers and started advertising. To secure new sources of revenue, hospitals became providers of substitute (to hospitals) services, such as outpatient surgery, home care, hospices, etc. The existence of these services and insurance coverage for their payment served to further decrease the demand for inpatient care.

The excess capacity among physicians and hospitals and the change in business incentives were important pre-conditions for market competition. However, it is unlikely that market competition would have occurred had it not been for the applicability and enforcement of the anti-trust laws. In a previous time, with similar pre-conditions, anti-competitive behavior by physician associations was able to prevent the emergence of market competition. In the 1930s excess capacity existed among physicians. However, prepaid plans and efforts by insurance companies to institute cost control measures were thwarted by actions of local medical societies [31–34].

As the health sector moves toward market competition and innovation, a number of state governments still do not recognize the changes that are occurring. Some states are still attempting to develop all-payer rate review systems that will prevent hospitals from offering discounts to different purchasers. These approaches are equivalent to price fixing agreements among all providers. Many states use CON statutes to prevent providers from entering markets. They also use bed reduction programs to eliminate excess bed capacity so as to protect existing large hospitals. However, it is unlikely that state regulation will be able to prevent the move to market competition. The pressures by business for lower premiums and the applicability of the anti-trust laws will be too great for many states to resist.

IV. The changing structure of the medical care delivery system

The above discussion stated the reasons for the emergence of market competition in what was previously a highly regulated market. The next issue of interest is the likely outcome of market competition in health care. To provide some indication as to how the medical care delivery system is likely to change, it is first necessary to discuss the determinants of market structure.

The market structure of an industry is defined by the number and size of firms within a market. In some industries, such as automobiles, there are few firms with each being quite large. In other industries, such as barbershops, there are many small firms. In still other industries there are different sized firms; an example of this latter case is the airlines. The importance of knowing the likely market structure of an industry is that it may affect the industry's performance. When there are many firms, each with a small market share, then they are faced with a great deal of competitive pressure. When there are few firms, each with large market shares, then the pricing policies of the firm may be higher in relation to their costs, efficiency may not be as high, there may be a greater emphasis on non-price competition, a greater emphasis on advertising, and there is likely to be a higher rate of technological change [35].

The main determinant of the number and size of firms in a competitive industry is which size of firm is most efficient. This relationship between cost and size is referred to

as "economies of scale" and differs for each industry. If there are no barriers to entering or exiting from an industry, then each firm will strive to take advantage of any economies of scale that may exist in order to survive. If a firm can not compete at the same price as a more efficient firm then it will either merge with other firms or go out of business.

In the past the structure of the health care industry was not determined solely by economies of scale. Legal (or regulatory) and financing methods also determined the structure of this industry. And many of these regulations negated the importance of economies of scale in the delivery of medical services. Of what use was it if a lower cost delivery system could be developed, but was it illegal?

The stated reasons for many of the legal restrictions was to enhance the quality of care and to protect the public. Cynics, however, believed that the profession was better protected than the public. The effect of these restrictions was to have fewer providers, higher prices, and less innovation in the delivery of medical services.

As many of the legal restrictions have been swept away by the anti-trust laws, and as methods of financing medical services have changed, economies of scale are becoming a more important determinant of the industry's market structure.

Medical services, however, do not conform to the requirements for a strictly competitive industry. The product, medical services, is not a standard service. Consumers of medical care place different values on different aspects of that service. For example, some types of delivery systems are viewed by the patient as being more restrictive in their choice of provider. For some medical services, patients are often willing to pay more to go to providers that are located closer. Still other patients place a greater value on the manner in which the provider dispenses care, i.e., the concern expressed by the provider and the amount of time devoted to a visit.

The reason for this discussion is to suggest that consumers may be willing to pay more for medical care or for health insurance than would be offered by the lowest cost, most restrictive provider. As long as consumer tastes vary, a variety of delivery systems (and types of providers within each delivery system) would be expected to co-exist in a competitive market [36]. Thus one characteristic of the emerging market structure would be the existence of different "products" or delivery systems being offered.

In the new competitive environment, it is likely that a single provider or insurer would offer alternative delivery systems. If the extent of economies of scale is sufficiently large, then an organization can take advantage of these cost savings by expanding into related product lines. For example, a particular firm could offer or participate in the traditional fee-for-service delivery system, also participate in prepaid health plans, and be a PPO organization as well. Thus an insurance company would attempt to segment its market by offering different products to each segment of the market. In addition to the above three approaches, an insurer would also attempt to go after those firms that self insure by offering Administrative Service Contracts only.

The capability of providers and insurers for delivering their services is similar regardless of the delivery system used.

How large any one provider or insurer group will become depends on the nature of economies of scale. It appears that there are very large savings as health organizations increase in size. Joint purchasing arrangements have been one method by which

hospitals have achieved such savings. Hospitals have formed affiliations with one another for the purpose of taking advantage of these types of economies. To take advantage of other cost savings, however, requires a common ownership arrangement rather than a loose affiliation. Malpractice insurance, advertising, support systems such as data processing, and access to the capital markets are a few such examples.

Initially, hospitals started taking advantage of economies of scale by forming loose affiliations with one another. As the competitiveness of the industry increased, hospitals began merging and forming large corporate chains. The next step was to go beyond horizontal mergers and vertically integrate. There were two reasons for this. First, the revenue opportunities for horizontal integration became limited. As the demand for hospital care declined, the number of financially viable hospitals also declined. The second reason was the result of third party payment systems. As the federal government and private insurers tried to reduce their expenditures, less costly substitutes to hospitals became reimbursable. Hospitals then became providers of these substitute services, e.g., hospices, outpatient surgery centers, nursing homes, and home care. Hospitals also moved into providing complementary services, such as retirement centers and other services to the aged.

Once a hospital chain became vertically integrated, it diversified its product lines. To keep its facilities occupied, hospitals began competing in the PPO market and affiliating with HMOs.

Apparently, the latest trend is toward increased vertical integration. Insurance companies are forming and even purchasing their own delivery systems, such as HMOs and PPOs. In turn, large hospital chains are purchasing insurance companies. The hospital chains, facing declining occupancy rates, believe that they can direct increased business to their own hospitals by marketing health insurance to business firms.

A very recent development has been the announced merger between the largest hospital chain, Hospital Corporation of America (HCA) and the largest hospital supplier, American Hospital Supply. The reaction by investors to this news was negative; the stock prices of both companies declined. Growth of the hospital supply industry has leveled off, particularly since DRGs have been instituted and hospital occupancy has fallen. The hospital supply industry is also considered to be very price competitive, thus it is not clear that HCA will receive reduced supply prices as a result of the merger. However, the main reason stated by the two companies for the merger is the greater access to capital as a result of using the combined assets of both companies.

Thus in the medical marketplace, increased size per se may not be that desirable unless it is also accompanied by economies of scale. It appears that the complementarity of products as well as economies of scale, particularly with respect to capital, may be the twin criteria of what the optimal size of the health care firm is likely to be.

The structure of the market is moving in the direction of several very large chains, which offer their services in different markets, both horizontal as well as vertical. The health care corporation of the future is likely to have branches all over the country; it will be vertically integrated – offering the entire spectrum of care, from wellness centers to acute care to retirement centers. It will compete in different segments of the consumer market, from fee-for-service to alternative delivery systems. And it will underwrite insurance as well as provide medical and other services.

V. The implications of market competition in health care

A. The implications to health professionals

The best illustration as to how the new market environment is performing is to examine the twin cities of Minneapolis and St. Paul [37]. By 1984, after relatively few years in existence, prepaid health plans in this area have signed up 36% of the market. As HMO market shares have increased, physicians in private practice have formed their own prepaid plans so as not to be excluded from the prepaid market. The intense competition among prepaid plans and between prepaid plans and the traditional plans has resulted in decreased hospital utilization. And because of their excess capacity, hospitals have started to compete on price, offering discounts to HMOs. With excess capacity among providers, new delivery systems are forming, such as PPOs, which are a form of price competition.

Facing decreased demand for their services, the hospitals in turn have decreased their demand for nurses. A recent strike by nurses against hospitals concerned the issue of layoffs and job security, rather than increased wages.

Physicians are experiencing decreased demand for their services and are changing their practice styles to become more competitive. Both hospitals and HMOs now use computers to monitor physician performance. Physicians participating in prepaid plans, even plans of their own, find that they must now conform to the plan's utilization guidelines.

These are only some of the consequences of market competition to health professionals. In many places physicians are finding that they must also learn how to market their practices and even consider advertising, a practice many physicians consider beneath the dignity of their profession. Physicians also find themselves in competition with hospitals over ambulatory care services, as hospitals develop their own ambulatory care clinics. With the increased supply of physicians and the growth of HMOs, many more physicians are becoming salaried employees. Physicians have also come in conflict with one another. As physicians find themselves with extra time, they are trying to expand the services they offer by performing services previously performed by other specialists.

Health professionals are also engaged in intense political competition among themselves. Each health profession attempts to use the State Practice Acts to increase the tasks they perform while preventing other professions from encroaching on their tasks. Thus optometrists are in competition with opthalmologists, obstetricians with nurse midwives, family practitioners with nurse practitioners, psychologists with psychiatrists, and podiatrists with orthopedic surgeons.

One response to increased competition has been to seek protection through the legislative process. Nurses, for example, are in the forefront of the movement to establish pay scales according to the concept of "comparable worth". Comparable worth goes beyond the already established legal principle of equal pay for equal work; the new concept is now equal pay for work of comparable value. Even if the work is not similar, such as a nurse and an electrician, or even a physician, if the work is of comparable value, then the pay should be equal.

Comparable worth seeks to substitute pay-finding commissions for the market system. There are currently a number of law suits that have as their goal the implementation of the comparable worth doctrine. There is also a movement in the Congress to legislate this concept if it is rejected by the courts. It is often during periods of economic hardship that interest groups seek to insulate themselves from competitive pressures.

The attractiveness of a career in medicine or other health profession has declined. Not only are the prospects for future income diminished but the costs of becoming a physician have been increasing. Tuition to medical and dental schools has been rising as federal and state support has declined.

Clearly, the increased supply of health professionals, the applicability of the anti-trust laws, and market competition, have had an adverse impact on the economic outlook and practice styles of health professionals. It is therefore not surprising that health associations such as the American Medical Association have been so opposed to market competition. And, unfortunately for physicians, it does not appear that these market conditions will change in the near future.

B. Implications for the public

The introduction of market competition to health care carries with it both positive and negative consequences.

On the positive side, the public now has greater choice of delivery systems. Those willing to limit their choice of provider, such as HMOs, can have lower out-of-pocket costs for medical care. There is also a great deal more innovation in methods for delivering medical services. Same day outpatient surgery, hospices, and home care, are examples of alternative methods of providing care that were previously provided in the hospital. Providers have become more responsive to the public's preferences. For example, as more parents want to give birth in their own home and/or use nurse midwives, hospitals have responded with "birthing rooms", to simulate home conditions.

The price of medical services is likely to increase at a lower rate. Increased concern by business over employee health costs and premium competition among insurers is resulting in greater efficiency in the provision of medical services. Hospitals must be efficient if they are to be price competitive to HMOs, or if they want to form a PPO. DRGs also provide hospitals with these same incentives. The cost of duplicated facilities can no longer be passed on to third party payers. There is also increased attention to managerial controls. Hospitals are developing computer profiles on their physicians to determine whether they are prescribing too many tests or not discharging their patients soon enough.

There has always been a concern that quality of care would suffer under a price competitive system. There is the fear that some physicians would engage in unethical behavior to increase their incomes. Or that HMOs and other providers would now have an incentive to provide fewer services. It is too early to document the effect of market competition on quality. However, there are several reasons why these concerns may be unwarranted.

To lower their marketing costs, HMOs and PPOs are attempting to enroll employees

directly at the workplace. As such, these alternative delivery systems must be approved either by the union or by the company. Further, there is increased sophistication today with computerized claims processing. Insurers, businesses themselves, as well as the provider organizations are using such systems to monitor costs and appropriateness of utilization. It has become easier to detect poor quality and such instances are likely to cost the HMO or PPO their business at that employer. Poor quality care does not make good business sense.

Malpractice insurance premiums, after rising very rapidly in the 1970s and then leveling off for the last several years, are once again rising rapidly. Many large provider organizations are attempting to lower their insurance rates through self-insurance or by bearing more of the risk themselves. However, all organizations are re-examining their quality assurance programs to determine how they can better improve their experience. There is likely to be greater emphasis on quality of care for those providers that are part of larger groups or that participate in alternative delivery systems.

The negative effects of price competition are likely to be found in the non-employer group business. It is both more difficult for the purchaser to detect poor quality and the cost to the provider from under-service are less.

Under Medicare DRGs, hospitals receive the same price regardless of how much service they provide. While it is too early to document the effects of fixed prices on hospital incentives, there is talk among health professionals of patients being discharged too early. Some of the costs of care have been shifted to the patient, their family, or to another insurer as when the patient is discharged to a nursing home.

The most severe consequences of competition, however, are with respect to the poor. Medicaid programs have been reducing the amount they pay hospitals for their medically indigent. As hospitals began facing strong budgetary pressures from other payers, a number of hospitals believed they could not subsidize the care of high cost indigent patients. If the expected cost of caring for a Medicaid patient is likely to exceed the reimbursement, some hospitals are refusing to admit such patients. This problem, referred to as "dumping", is receiving greater attention in the media [38].

Inadequate care to the poor has arisen because many states do not pay a sufficiently high price to cover the costs of their poor. Even if a state paid a price which was on average sufficient to cover the costs of their care, the price would still be below the costs of their high cost patients. A hospital still has the incentive to "dump" the high cost patients. Since some states do not reimburse at a rate even to cover the costs of care on average, more of the poor get refused admission to certain hospitals.

Public hospitals, including those teaching hospitals operated by state governments, receive more of the patients refused admission at other hospitals [39]. These hospitals find themselves disadvantaged if they are forced to compete while subsidizing the costs of patients refused by their competitors.

The lack of adequate payment by many state Medicaid programs is raising concern that the U.S. is returning to a two-class medical system.

Several approaches have been suggested to resolve the issue of uncompensated care for the poor. If the state's payments are on average sufficient to cover the costs of care for the poor, then to eliminate the problem of preferred risk selection by providers, the state should contract with HMOs on a capitation basis. HMOs should be willing to

compete for this business, as long as the capitation payment is on average sufficient to cover their costs. The Congress has already given states the flexibility to remove free choice of provider under Medicaid programs [40]. The public also finds this approach acceptable [41].

It is likely that an increasing number of states will develop bidding procedures for capitation contracts. A similar process, on a voluntary basis, will be started this year for Medicare patients. Both of these types of programs will further stimulate the movement toward HMOs.

Capitation contracts, however, will not work in those states where there is inadequate payment for the poor. If a state is unwilling to spend sufficient funds for the care of its poor, then a competitive system will not provide that care. The problem is not with the competitive system but with the state. In those states where these situations exist, providers themselves have proposed new state legislation. They have proposed that all hospitals should be taxed to pay for uncompensated care provided by the few hospitals. The alternative would be to provide the care through capitation systems.

Competition eliminates cross subsidies. Other payers will go elsewhere if a provider bills them for the costs of others. Unless government payments for the aged and medically indigent are sufficient to cover their costs of care, hospitals will be discharging these patients too soon or these patients will be shifted to other providers, namely the public hospitals. While one outcome of a competitive system is increased efficiency, another is that the manner in which the poor are financed and provided for becomes more obvious and requires society to make explicit choices on how we wish to provide for them.

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