Abstract (summary)

The economic forces underlying the current wave of consolidation and restructuring of the health care industry are examined. In most industries, the economic motives for mergers fall into 3 categories: 1. efficiency enhancement through economies of scale or scope, 2. attempts to gain market power, and 3. tax advantages. While these basic economic objectives certainly apply to mergers in the health care sector, the current wave can be understood only by considering in addition certain unique features of the health care marketplace. Two factors that distinguish health care from other industries are relevant in this regard. The first is imperfect and asymmetric information, which undermines the ability of patients to be cost-conscious consumers on their own behalf and, thereby, increases the importance of providers and other intermediaries in supplying information and making treatment decisions. The 2nd distinguishing feature of health care is the pervasive role of insurance and 3rd-party payment.

Full Text

The organization of the health care industry has been undergoing sweeping changes in recent years. By one count, 1,318 corporate acquisitions took place in the health sector between 1989 and 1993. The 651 transactions for which financial data were disclosed publicly had a combined value of over $87 billion. An additional 2,152 health care joint ventures occurred during this time period. For the 72 of these alliances for which financial data were disclosed, the combined value exceeded $5 billion, according to the Securities Data Company.

This article examines the economic forces underlying the current wave of consolidation and restructuring of the health care industry. In most industries, the economic motives for mergers fall into three categories: efficiency enhancement through economies of scale or scope, attempts to gain market power and tax advantages. These motivations are not mutually exclusive and a particular merger may involve more than one.

While these basic economic objectives certainly apply to mergers in the health care sector, the current wave can be understood only by considering in addition certain unique features of the health care marketplace. Two factors that distinguish health care from other industries are relevant in this regard. The first is imperfect and asymmetric information, which undermines the ability of patients to be cost-conscious consumers on their own behalf and, thereby, increases the importance of providers and other intermediaries in supplying information and making treatment decisions. The second distinguishing feature of health care is the pervasive role of insurance and third-party payment. The current restructuring of the health care sector is driven by the changing nature of the health insurance market. This, in turn, results from growing demand for control over costs and from technological
changes in medical and information technologies that have permitted new responses to the demand for cost
control. In the new world of managed care, the optimal size and structure of the health care enterprise is certainly
larger but its precise form remains to be determined. Through the trial and error of many acquisitions and some
divestitures, the industry is groping towards a more efficient structure to meet these new market conditions.

Explosion of spending

Between 1970 and 1990, health spending per capita grew at an average annual rate of approximately 4 percent.
The chief engine of this spending growth has been technology-driven increases in the "quality" and "intensity" of
care, which result in more services and more complex services being provided in each medical encounter. However,
imperfect formation and insurance-driven moral hazard have also certainly contributed, often in subtle ways.
Because insured customers are indifferent to price, providers have competed less on price than on non-price
dimensions of service, including prompt access to new technologies, advanced equipment, convenience and
amenities. Suppliers of new technologies have had every incentive to develop quality-enhancing technologies, but
little incentive to develop cost-reducing technologies. This non-price competition drives up the price of medical
goods and services. Rising costs tend to increase the demand for insurance coverage, thereby reinforcing moral
hazard and the cost spiral.

Managed care and consolidation

The move toward managed care has changed the nature of competition in the health care sector dramatically, and
this in turn has changed the optimal size and structure of health care organizations. Some of the driving forces in
the market are:

Horizontal mergers have been most frequent in the hospital sector, which has been the primary target of cost
control efforts because the potential savings are greatest. Hospital care traditionally has accounted for roughly half
of total health care spending. Inpatient hospital services have the most comprehensive insurance coverage and,
under traditional insurance with cost-based and fee-for-service reimbursement, were probably most subject to
non-price competition and excessive costs.

Consequently, inpatient use was the prime target of early HMOs, which succeeded in cutting hospital days per
capita by 30 percent or more compared to unrestricted fee-for-service plans. Managed indemnity plans also have
reduced hospital days drastically through aggressive pre-admission and concurrent utilization review. At the same
time, Medicare's DRG-based prospective payment system dramatically reduced length of stay and created
incentives to shift minor surgery and other services to ambulatory facilities.

The shift to outpatient care has been facilitated by advances in medical technologies, such as microsurgery and
other non-invasive techniques that can be done in an ambulatory facility, rendering obsolete facilities for invasive
population declined approximately 13 percent, and almost 19 percent for those under 65. Average hospital
occupancy figures understate the full impact because beds that have been withdrawn already are excluded from the
denominator. Lower volume implies higher cost per case, other things equal, since fixed costs must now be spread
over a smaller volume of cases.

Under the old world of retrospective reimbursement for costs, hospitals competed for physicians and patients to fill
beds by offering prompt access to new technologies, nice amenities, etc. But with DRG-based fixed rates for public
patients and increasingly price-sensitive private payers, such strategies are counterproductive. With competition on
the basis of costs, eliminating unnecessary capacity and spreading fixed costs may be essential to survival. To the
extent that quality is a factor in the negotiations, the trend is to measure quality by evidence of outcomes, not
inputs, as in the past.

These forces underlie many of the mergers between hospitals in the same or contiguous market areas. The
objective is consolidation and realization of economies of scale and scope through shared overhead facilities,
including information systems, expensive capital equipment and personnel. By rationalizing specialty care so that,
for example, one facility does cardiac care while the other does obstetrics, costs can be reduced. Quality also is enhanced since facilities that perform higher volumes of surgical procedures generally have better outcomes. Such rationalizations must proceed with care, however, because joint allocation of hospital services may be viewed as a per se illegal market allocation agreement under Section 1 of the Sherman Act.

Cutting costs was stated as the primary motivation for the merger of two of Boston's premier research and teaching hospitals: Massachusetts General and Brigham & Women's. By combining administrative functions such as finance and computer services, the hospitals hope to slash annual operating costs by as much as 20 percent, or roughly $240 million. These hospitals may now be able to compete more effectively for contracts with managed care companies.

Similarly, the merger of Galen Corp. and Columbia Hospital Corp., both for-profit hospital chains, was expected to result in $30 million annual savings on purchasing and administrative costs. Thus even in the case of hospital chains that operate in geographically separate markets, there are opportunities for cost savings.

Increases in optimal scale are not limited to the hospital sector. The merger of four companies that provide home infusion services to create Coram Healthcare Corp., which will be the nation's second largest infusion therapy concern. Coram believes it can be more competitive as a nationwide chain. The consolidation of corporate offices and overlapping centers is expected to result in an estimated savings of $10 million annually.

More generally, technological advance in information systems had vastly increased the potential for efficient operation of large scale networks, for monitoring patient care and provider behavior. The high fixed costs of new information systems and the need to share information across different providers create opportunities to exploit new economies of scale and scope. Thus developments in information technologies may be one reason why the growing payer demand for cost control is occurring now but not previously.

Competing on cost and quality

The emergence of employers and other managed care purchasers as cost-sensitive buyers has changed the rules of the game by which providers must compete, prompting restructuring and consolidation in order to compete more effectively. Integrated networks have many advantages over individual practitioners for competing in this marketplace, which are not mutually exclusive. Only the most pervasive are discussed here: transaction cost economies, better control of cost and quality and superior bearing of risk.

One-top shopping

Networks that provide a comprehensive range of medical services offer savings on transaction costs to health care purchasers, including self-insured employers, HMOs, Medicaid agencies and others. Similarly, multistate employers with employees in diverse geographic areas seek the transaction cost savings of contracting with a single insurer or provider network that can serve employees in all markets.

Traditionally, HMOs and managed care plans have formed around local networks of providers. The current merger wave has produced alliances between such provider groups in different product markets and different geographic markets. These administratively integrated but possibly geographically diffuse firms or networks hope to compete by offering its customers one-stop shopping. In this case, in addition to possible economies of scale and scope in internal operations, the network offers contracting economies to its customers, permitting contracting that spans product and geographic markets.

For example, the merger of Columbia and HCA combined the two largest for-profit hospital chains. The resulting firm had 190 hospitals in 26 states, enabling it to provide coverage to large employers or other purchasers throughout a region or state. [Subsequently, Columbia/HCA, which included Galen, has announced plans to acquire HealthTrust, which previously purchased Dallas-based EPIC months before, for a grand total--so far--of 311 hospitals in 37 states and two foreign countries, with about 172,000 employees and assets and annual revenues in excess of $15 billion.] The merger of two HMOs, Qual-Med and Health Net, achieved a similar geographic goal.
Health Net was the second largest HMO in California, while Qual-Med had locations in Colorado, Washington, Oregon, New Mexico and Idaho. The combined entity hopes to appeal to employers with operations throughout the Western region by enabling them to deal with only one insurance plan.

Mergers have occurred between providers of several types of related services, in efforts to gain competitive advantage by simplifying the contracting process for purchasers. Medical Care International, an operator of free-standing surgical centers and Critical Care America (CCA), a home infusion services provider, merged to form Medical Care America in order to provide a service package to insurers and HMOs. Managed care accounts for 20 percent of CCA’s business, a percentage it expects will increase in the future. Columbia/HCA recently agreed to acquire Medical Care America. Fifty-two of Medical Care’s 96 surgical centers are in markets served by Columbia’s hospitals. This acquisition continues Columbia’s strategy of acquiring surgical centers, rehabilitation centers and other outpatient facilities in order to offer a comprehensive range of services to purchasers.

Probably the most common form of mixed alliances are those between physician groups and hospitals. These are driven by other factors in addition to contracting economies and are discussed below.

Control of over-utilization

Even more important than savings in transaction costs, the integrated provider network can offer savings from greater control and potentially more efficient use of medical resources. Purchasers--including insurers, employers or Medicare--are concerned about the cost and quality of care over the full range of medical services and patient conditions. But the purchaser who contracts separately with individual hospitals and physician groups is still at risk for total costs, which may be inefficiently inflated due to the incentives for each separately capitated entity to shift costs to others. By contrast, the integrated provider network can assume a comprehensive capitation payment per insured patient to cover the full range of medical services. In addition to incentives to control overall costs, comprehensive capitation, in principal, creates incentives for efficient substitution among all medical resources, thereby minimizing the cost of producing whatever level of care is selected.

For example, distortions such as the DRG-induced incentive to substitute ambulatory care for inpatient care are eliminated. Thus the capitated integrated network can reduce both the mean and the variance of costs for purchasers.

The important point here is the pre-payment or capitation of providers. Note that any form of insurance is prepaid from the perspective of the policyholder, who pays a fixed premium in return for coverage during the policy period. However, with experience-rated premiums, which are common for large employers, the policyholder pays in the subsequent period for benefits paid in the prior period. If providers are paid fee-for-service, the cost-increasing effects of moral hazard [overuse of medical services] are strong, unless constrained by copayment and utilization review. However, capitation payment of providers reverses these incentives and hence gives the experience-rated employer less exposure to cost increases.

Several recent consolidations illustrate this trend towards more comprehensive provider systems--for example, the acquisition by Columbia/HCA of surgical centers, and the purchase of EPIC by HealthTrust, [and then by Columbia/HCA] which added a number of ancillary services such as home care, rehabilitation and physical therapy. These transactions not only reduce contracting costs for purchasers but also may achieve potentially much larger cost savings through better information and incentives. By operating both hospitals and surgical centers in the same markets, Columbia should have better information and incentives to direct patients to the most cost efficient type of care. Where physicians, hospitals, outpatient centers and other providers are combined into one organization, incentives are created, at least in principle, to use the most cost-effective mix of providers.

Probably the most common mixed-provider type of alliance are those between physician groups and hospitals. These are in part a response to the increasingly common and important role of primary care physicians as gatekeepers who control access to specialty and inpatient services in more aggressive networks. This gatekeeper role makes primary care physicians the critical customers of hospitals; they control referrals to specialists who in turn influence decisions about whether and where a patient will be hospitalized.
Hospitals that already face declining occupancy and excess capacity are rushing to establish ties with these primary care physicians in an attempt to secure a steady demand for hospital services. The traditional rule of hospital management, that hospitals compete primarily for physicians, and only secondarily for patients, has become even more true. But whereas this competition traditionally focused more on specialists and took the form of better amenities or access to the most advanced equipment, now such cost-increasing strategies are counterproductive.

Winning strategy

The winning strategy now for assuring a supply of patients to fill beds and provide employment for medical staff is to develop contractual and organizational ties to primary care physicians. These physician-hospital relationships take many different legal forms, including joint ventures, foundations, linkage through management service organizations and integrated health organizations that control hospital facilities, medical clinics and education foundations under one umbrella company. The choice of form may be influenced by tax and regulatory considerations. For example, a non-profit foundation is exempt from corporate taxes and can issue tax-exempt debt; a nonprofit hospital's own tax-exempt status also may be less threatened by participation in a non-profit entity than by participation in a for-profit entity.

Another regulatory constraint are the Medicare Anti-Kickback provisions. Initially enacted to deter remuneration or other arrangements to induce referrals, these provisions have become an obstacle to physician-hospital arrangements through which hospitals attempt to consolidate their supply of referrals through contractual relations with physicians. An arrangement that is found to be in violation of the anti-kickback statute also could result in the nonprofit hospital losing its tax-exempt status. (Application of this statute in this context seems misplaced, given the incentives of capitated physicians to constrain rather than overrefer to inpatient settings. Illogically, these constraints on referrals apply only to contractual relationships, whereas if the hospital-physician group formed a fully integrated staff-model HMO, in which the physicians are employees and refer exclusively to the HMO's hospital, no question would arise about appropriateness of the referral.) Finally, state laws against the corporate practice of medicine are a significant obstacle to certain types of physician-hospital organizations in some states. These laws prohibit the employment of physicians by one other than a licensed physician. By one interpretation, these laws were enacted originally under pressure from the medical profession to impede the formation of HMOs. They have been repealed in some states but remain a significant barrier in others, thus contributing to the great variation in extent and organizational forms of physician-hospital alliances.

Regardless of the exact form of physician-hospital organization, some basic economic forces are common to the great majority of these alliances. Through alliances with physicians, hospitals seek to establish a base of referrals for specialists' services and inpatient care. Essentially, it is an attempt to preserve or increase market share in a declining market. In exchange, hospitals provide physician groups with access to capital, as well as administrative and contracting services. Physicians are relieved of having to deal with paperwork and are able to share the financial risk. The relationship also may create a more efficient allocation of capital outlays between physicians' offices and hospital facilities.

The formation of these physician-hospital groups is often facilitated if physicians themselves already are organized as a group. Thus another growth trend is in the formation of medical groups that are risk-sharing, integrated entities, in contrast to the less formal associations that have existed in the past.

Network advantages

In understanding the incentives for size and diversity, given the shift to capitation, it is critical to distinguish between two uses of the word "risk." The first is exogenous or "population" risk, that is, the risk related to the frequency and severity of medical conditions experienced by the insured population, which is beyond human control, at least in the short run. (In the long run, life-style changes and other forms of prevention may shift the distribution of exogenous risk characteristics.) This risk can be diversified through pooling to take advantage of the "law of large numbers," such that the outcome for the pool is reasonably predictable although it is highly uncertain for any individual. Providing this risk-pooling function is the fundamental role of insurance.
The term "risk" also is used in the context of "putting providers at risk" to refer to forms of reimbursement that create incentives for providers to control overuse of medical services (moral hazard). The issue here is costs of services provided, given the realization of the exogenous risk. When providers are paid on a fee-for-service basis and patients are fully insured, payers are subject to this moral hazard risk; when this is transferred to providers through capitation, it is not really risk to the provider, to the extent that the decisions on service utilization are within his or her control. But an inevitable consequence of full capitation is that the uncontrollable population risk also is transferred to providers, along with the moral hazard "risk. The moral hazard risk is most efficiently born by the individual physician, but the uncontrollable population risk is not. The capitated physician who happens to enroll one or two patients with abnormally severe conditions requiring unavoidably high medical expense could face financial ruin. Thus capitation of primary care physicians usually involves capitation of the physician group, which then pays individual physicians on a fee-for-service basis with a withhold. Capitation of individual physicians is usually for primary care services only, with most exposure subject to stop-loss insurance. But these exclusions to limit exogenous risk also reduce incentives to conserve on the excluded services. A capitated network that spans a larger volume of patients and a comprehensive range of services is more diversified and hence more able to bear these exogenous risks. Smaller networks must purchase reinsurance or contract with some other risk-bearing entity, thereby diluting the incentives for control of moral hazard. Thus given the trend towards provider assumption of risk through capitation, as a strategy to control moral hazard, the fact that this also forces providers to bear exogenous risks creates incentives to form larger groups for pure risk-spreading purposes.

Of course there is a trade-off here. Provider networks ideally would offer a large enough range of services and providers to meet consumers demand for choice and comprehensive care, as well as offer broad diversification of exogenous risks. But the larger the provider network, the greater the incentive for each provider to "shirk," since his or her performance will have a negligible effect on the performance of the group as a whole. Thus the optimal size and structure of networks and the optimal management strategies for effective control within large networks remain to be determined. The current maze of networks and linkages partly reflects the trial and error that is a necessary stage in learning how to operate most efficiently in the new environment.

Moreover, even in the long run there may be no single best "one-size-fits-all" optimal form of health care organization. Optimal network structure differs between rural and metropolitan areas. In addition, within metropolitan areas, there may be differences based on consumer preferences, medical norms and traditional relationships and state regulations. However, it is this experimentation in how best to compete on cost and quality that underlies much of the current restructuring of physician-hospital relations and organizational forms. These developments offer a promising approach to address the fundamental problems of asymmetric information and moral hazard, in order to achieve reasonable control of health care costs.

Being there--first

The evidence from markets that are leading the trends towards integrated systems indicates that other, less advanced markets still have a long way to go in cutting costs, particularly inpatient days and associated costs. There remain differences of over 25 percent across geographic markets in the number of inpatient days per thousand population, whereas within a "mature" market such as Los Angeles, the differences are much smaller and they cluster at the low end of the range across markets. Similarly, premiums per member per month have lower mean and variance across plans within mature markets than across market areas.

Inpatient days per thousand insured lives range across communities from 279 to 380, or over 25 percent, with almost a 50 percent spread in premiums per member per month, from $125 to $297. By contrast, the spread across the seven largest plans in Los Angeles is from 175 to 289 inpatient days, with monthly premiums ranging from $100 to $119, according to a presentation by Jacques J. Sokolov, M.D., to the Annual Meeting of the American Bar Foundation last August.

The entities that first organize systems that implement these cost reductions in markets where use rates are currently high are likely to realize significant profits in the short run. The reason is that for the early innovators, costs may fall faster than premiums: the difference is profit, after covering expenses of capitalization and operation
of the system required to implement the cost savings. In the long run, these excess profits will attract entry and premiums will be bid down to normal rates of return, at least for the marginal firm. This potential for short run profit creates a strong incentive to be a first or early mover in a market or submarket area. This plausibly accounts for the seeming rush towards formation of networks, even in markets where buyers have so far not adopted highly aggressive purchasing strategies.

The advantages of the residual risk bearer in a network that takes the lead in controlling costs in an area are several. Being first to make significant cuts in inpatient use in an area will permit above-normal profits, as long as market premiums reflect the higher costs of the marginal plan. Being the residual claimant in such an innovative plan means capturing this difference between premiums and costs. Thus each of the key players who can significantly affect costs—insurers, hospitals and physicians—and has access to the necessary capital, has incentives to try to capture control as first-mover and residual risk bearer, particularly in immature markets. Insurers, HMOs and hospitals typically have access to capital; physician groups are critical players but some lack the necessary capital. For-profit management service organizations also have entered the market, and those that are publicly traded are reportedly operating at relatively high price-earnings ratios—a crude indicator of the capitalization of the potential profits outlined above.

The incentive to take the initiative is perhaps strongest for hospitals, which otherwise have the most to lose because the cost savings at the plan level come primarily from lower inpatient use. Fewer inpatient days per thousand means lower revenues for a hospital paid on a per diem or per admission basis (assuming some reduction in admissions). The reduction in hospital revenues is likely to exceed the reduction in hospital costs, because of fixed costs that are not variable regardless of occupancy rates, at least in the short to medium term. Hence for the passive hospital operating as an independent supplier to the managed care entity, advanced managed care means lower profits. The same profit squeeze may apply to the medical staff.

But if the hospital takes the initiative in allying with physician groups to form a network that can contract for comprehensive services on a capitated basis, it gains in two ways. First, the decline in occupancy may be stemmed through the alliance with physician gatekeepers; essentially, the lead hospital increases its share of the lower total inpatient use, as discussed above. But second, it gains as residual risk bearer, since the inpatient reduction that it experiences as a reduction in revenues as a hospital, it realizes as a reduction in costs as the residual risk-bearer. Assuming no change in the capitated premium it receives on behalf of the plan, each dollar saved through reduced inpatient use is a dollar added to profits as a residual claimant; this may more than offset the loss in net revenues as a hospital, since net revenues fall by less than gross revenues, assuming some saving in variable costs. Thus by being the residual claimant for the cost-cutting system as a whole, the hospital can turn a net loss into a profit.

Of course in reality the ability of hospitals to turn a potential loss into a profit is constrained by both market and regulatory forces. Potential profits as a residual claimant of the health plan may be squeezed both by competition from other plans, which depress premium revenues, and by competition for doctors, which bids up the prices that hospitals must pay for alliances with primary care physicians. Thus physicians may capture part of the potential profit through the price that they charge for their practice assets. Because the supply of primary care physicians as gatekeepers is relatively inelastic in the short run, physicians in areas where demand is high have reportedly been able to capture very high prices for their practices. However, their ability to capture the full value of their temporary monopoly position may be constrained by the anti-kickback statute, which prohibits payment for referrals. This constraint may be greater for the first hospital to initiate physician practice acquisitions in any area; over time, as prices rise above the value of the capital assets in their alternative uses, these higher values enter the standard of fair market value for subsequent acquisitions. In any case, despite these potential regulatory constraints, the huge surge of physician office acquisitions indicates that these regulations have not preempted acquisition strategies by hospitals. The surprisingly high acquisition prices paid in some instances, according to press reports, suggest that part of the potential profit has been captured by physicians, which is not surprising, given their key role in the cost-control strategy.

The advantage of size
The integrated network also has a competitive advantage in responding to payers' demands for competition on outcomes as well as cost. The outcome for an individual patient or individual physician lacks statistical credibility and requires adjustment for the initial health status of patients and for referrals of difficult cases to other physicians. These problems of small samples and hence low "signal to noise" ratios undermine outcomes measurement for all but the largest hospitals, and even then the issues of adequate adjustment for health status ex ante and referrals a post remain. The potential for meaningful measurement of the contribution of medical providers is greater the larger the patient base and the more comprehensive the range of services covered. Average outcome for a large group of patients is a potentially valid statistical indicator of quality of the network of providers from which they have received treatment, given appropriate adjustment for prior patient conditions. Thus large provider networks can better respond to purchaser demands for accountability on quality as well as cost. The integrated network that competes on the basis of cost and quality can thus be viewed as a response to the aforementioned problems of asymmetric information and moral hazard. So far, payer demands are strongest for control of costs, with quality accountability playing at most a secondary role in competitive contracting. However, if demand for outcomes measurement increases as the technology for such measurement improves, broad networks will have a competitive advantage over isolated providers, for purely statistical reasons.

Manufacturing and managed care

The recent wave of alliances between drug manufacturers and managed care organizations illustrates attempts to move beyond narrow management of drug costs to broader management of disease costs, ideally to achieve the most effective mix among pharmaceutical and other forms of treatment. Merck's $6 billion acquisition of Medco, the nation's largest pharmacy benefit manager and mail order distributor, precipitated a chain reaction of similar alliances. SmithKline Beecham responded by purchasing Diversified Pharmaceutical Services; Pfizer formed a joint venture with ValueHealth; Bristol-Meyers teamed up with Axion, and Eli Lilly has bid for PCS.

These alliances between drug manufacturers and pharmacy benefit management firms reflect a real shift in the opportunities and constraints facing the research drug industry. The darling of Wall Street in the 1980s, this industry has seen reductions in capitalized value of over 30 percent in the 1990s as a result of the impact of managed care. Fifty percent of all Americans already obtain prescription drugs through some form of managed pharmacy benefit, and this percentage is increasing rapidly. Large employers, HMOs and even conventional insurance plans, increasingly hire pharmacy benefit managers (PBMs) to manage the outpatient drug component of their health plan using a range of strategies. Formularies, which are lists of preferred drugs that are approved for reimbursement, create the leverage necessary to negotiate a discounted price from the drug manufacturers. PBMs contract selectively with pharmacies, offering higher patient volume in return for discounted retail margins, and further reduce distribution costs by using mail order for maintenance drugs. They also operate information systems that permit contract pharmacists to determine numerous characteristics about each customer or insurance plan using on-line computer technology. This includes the status of the patient's coverage, copayments due and generic substitution rules.

By acquiring or allying with these pharmacy benefit managers, drug manufacturers seek to gain more immediate access to purchasers, extending potential markets for their drugs. While this may appear ominous, exploitation of this potential is constrained by competition. If a PBM seriously biased formularies in favor of the drugs of its parent company, it would lose its credibility and hence its value as a neutral manager of drug benefits. Consequently the value of the combined operation would decline relative to the value of the two firms operated as separate entities.

A more plausible explanation of the motives for these mergers between drug manufacturers and PBMs is potential efficiency gains from use of the databases to develop information on cost-effectiveness of different drugs and protocols for disease management. For example, SmithKline and Pfizer plan to use these alliances to identify circumstances where drug therapy can be used to reduce hospital stays, eliminate the need for surgery and generally increase patient well-being. Drug companies can then use the results of these studies to market directly to large employers or insurers.

Trends to watch
For a number of reasons, consumers in general are not cost-conscious with respect to their use of medical care. First, the widespread presence of health insurance separates the consumption and payment functions. Although this protects consumers from the possible burdens of health care costs, it also acts like a subsidy to consumers, creating moral hazard that leads to overuse and wasteful expenditures. Second, with significant informational asymmetries between users and providers of health care, it is difficult for consumers to monitor quality and respond effectively to quality differences in the marketplace. Third, the favorable tax treatment of health benefits further exacerbates the lack of cost-consciousness of consumers. These factors help explain the large and rising expenditures in health care in the U.S.

In response to the growing demand for cost control, the market has evolved a range of new provider-targeted strategies. The trend toward managed care reflects a more active role by payers--employers, insurers, government--and has changed the nature and strength of competition in the health care industry. This, together with technological advances in both medical techniques and information systems, has changed the optimal scale and structure of the health care enterprise radically. These trends have been building for some time and are likely to proceed in full force under most plausible outcomes of the health reform debate.

The volume and variety of consolidations occurring across all segments of the health care sector clearly indicate an industry that is in flux, with experimentation and groping to find optimal structure and scale. Providers can better compete to meet the demand for high quality and reasonable cost through larger networks that consolidate and eliminate duplicative capacity, that coordinate complimentary services and bear risk. These arrangements include many opportunities for achieving traditional economies of scale and scope, some of which are familiar but some are peculiar to health care. But perhaps the single most powerful force is unique to health care. It is the incentive to form networks that are sufficiently large and diversified to take capitation forms of payment. Such networks can offer lower premiums with less risk to purchasers because the assumption of risk by providers reverses their incentives towards cost control. The short run profit available to those entities that first assume risk and effectively control cost is one of the forces driving the rush to alliances and network formation. This applies particularly to physician-hospital arrangements but also to other mixed provider alliances. Thus these trends reflect attempts to achieve more efficient solutions to the problems of asymmetric information, risk, insurance and moral hazard that have traditionally undermined efficiency in health care markets.

Actions that may look anti-competitive in traditional markets may on balance enhance efficiency in the health sector given its peculiarities. For example, the traditional evaluation of the anti-competitive impact of mergers examines the relevant market and the change in market concentration. However, marketshare may be a misleading indicator of market power in the health care sector because of the countervailing power of insurers and other large payers. In fact, this purchasing power of larger payers is a driving force behind the consolidations, putting providers under pressure to increase efficiency and reduce costs in order to survive. This purchasing power of large buyers is sometimes mislabeled monopsony power, with implications that it may lead to a socially undesirable restriction of output. Monopsony inefficiencies may occur in markets where a single buyer faces an upward sloping supply curve--a higher price must be paid for greater output--which creates incentives to restrict demand below the socially optimal level. However in health care markets the presence of fixed costs generally leads to decreasing marginal cost at the level of the firm, and this flows through to the industry level when there is excess capacity.

The reason that large buyers in health care command lower prices is because they confront suppliers with more elastic demand: a large buyer that shifts its source of supply can dramatically affect market shares of competing suppliers. For suppliers with fixed costs and decreasing marginal costs, a reduction in output leads to higher average cost, and hence lower profit per unit on the smaller volume. This interpretation, that large buyers command lower prices because they make demand more elastic, is more consistent with the facts of the hospital industry or pharmaceutical industry, where price discounts to large buyers have attracted most attention. Of course in the presence of fixed costs, sellers may be willing to accept prices below full average cost, as long as marginal costs are covered. This will inhibit their ability to maintain capacity or generate new products in the long run, and this is an issue of serious social concern. However, it is very different from the issue of suboptimal output due to monopsony power.
Similarly, agreements among providers to deliver services according to fixed fee schedules, or the practice of offering substantial discounts to large volume buyers, may raise concerns about price fixing or price discrimination. However, such market arrangements may, on balance, be efficient strategies to control costs in the face of third-party payment, moral hazard and uninformed consumers. Again, traditional analysis must be modified to reflect the peculiar problems of the health care marketplace. Statutes related to the corporate practice of medicine and the anti-kickback statute also may obstruct the efficient choice of organizational form.

The current merger wave no doubt includes some experiments that will not survive the test of time and market competition. While public policy must be watchful that consolidations are not permitted to abuse market power, the opposing risk is that regulatory obstacles will obstruct the playing out of these experiments which offer our best hope of achieving a competitive and reasonably efficient we cannot hope for perfection--solution to the problems of delivering high quality health care at reasonable cost.

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