

California/Milbank Series on Health and the Public

1. *The Corporate Practice of Medicine: Competition and Innovation in Health Care*, by James C. Robinson

*History of Medicine*  
**The Corporate Practice of Medicine**

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*Competition and Innovation in Health Care*

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cian organization. And a growing number of medical groups, corporate consulting firms, and network partners are willing to offer strategic advice or alliances without demanding a full asset transfer. It may be that physician-hospital relationships will go through a life cycle of fragmentation, integration, and then renewed separation, as independent but interdependent firms alternatively compete and collaborate in pursuit of their partially congruent and partially conflicting goals.

## The Corporate Practice of Medicine

The traditional health care system, dominated by the professional guild and financed by indemnity insurance, has been shattered beyond any possibility of repair. Once complacent taxpayers and formerly paternalistic employers have fought back against inflating costs and escalating premiums, choking back the once massive flow of subsidies for inefficient small practices, fragmented delivery systems, and cost-unconscious consumer demand. Community-rated insurance pools have fractured as self-interested and often self-insured purchasers pursue better value for their health care dollar. Consumers are increasingly assertive as to their preferences and willingness to pay for particular health benefits and medical interventions. This diversity in demand generates a commensurate diversity in supply. Physician, hospital, and insurance organizations now seek ever greater scale to offer ever broader scope. Niche players still are to be found in the interstices of the health care system—in rural areas, specialized services, and unconventional therapies that do not lend themselves to consolidation. But the dominant market strategy is full service diversification, the production and marketing of myriad services to match every preference and every pocketbook. Some firms are overreaching and overconsolidating, constructing health care conglomerates paralyzed by weak individual incentives, internal influence politics, and risk-averse leadership. We observe turbulent cycles of expansion and contraction, diversification and refocusing, mergers and divestitures. But the system never returns to the status quo ante. The emerging organiza-

tion of medicine will resemble neither the cottage industry of professional dominance nor the vertically integrated system of managed competition. It will build on the innovations attempted and the lessons learned by multispecialty medical groups, independent practice associations, physician practice management firms, and physician-hospital organizations. The health insurance industry will build on the experiments of the PPO and network HMO, diversifying into multiple products and markets in search of new customers and higher revenue. These organizational experiments will be superseded in their turn by innovative upstarts. Patient needs and consumer preferences are varied, conflicting, and ever-changing. There is no one best solution, no enduring compromise, no form of organization, method of contracting, or system of finance that will not in turn be surpassed in the heedless rush of events.

Three powerful and conflicting forces will dominate the future trajectory of the health care system. The first and most fundamental will be the continuing pressure to adopt new cost-increasing technologies while moderating the economic burden on taxpayers, employers, and consumers. New products and procedures are in part endogenous to the health care system, since clinical experimentation occurs in many settings and the rate of diffusion is influenced by forms of organization and insurance. Changes within the health care system that promote consumer and provider cost-consciousness will attenuate the inflationary spiral. But in large part the new technologies derive from a broader accumulation of scientific and engineering knowledge, from advances in physics, pharmacology, and pathology that highlight opportunities for intervention in the mechanisms of disease, trauma, recovery, and repair. These advances do not remain under the exclusive purview of scientific or political elites but are communicated widely to the citizenry, generating strong demands for their immediate diffusion. It is now common for patients to arrive in their physicians' offices laden with articles and advertisements describing drugs and devices that a few months earlier were in the laboratory or undergoing clinical trial. Yet this enthusiastic embrace of new clinical interventions is not accompanied by a commensurate public commitment to pay for them. The increasing wealth of society permits ever-growing investments in health care and it is to be assumed that expenditures will pace the overall growth in the economy. But even the wealthiest of nations cannot continue on a trajectory that would devote 15 percent, then 20 percent, then 25 percent of total resources to health care. The limits on social willingness to pay manifest themselves in the taxpayer revolt, in labor market trade-offs between wages and fringe

benefits, and in the tens of millions of citizens who lack even the most basic of insurance coverage.

The second feature of the emerging health care system, which derives from the first, is continued innovation in forms of organization, ownership, contract, finance, and governance. Given the pressure to restrain inflation, large rewards will accrue to those who pioneer cost-decreasing products and processes. Outpatient surgery, home health care, subacute facilities, nurse practitioners, inpatient hospitalist teams, practice profiling, drug formularies, and case managers for patients with chronic illness represent clinical innovations that attenuate rather than accentuate the cost of health care, compared to what the traditional hospital-centered, specialty-dominated, and indemnity-financed system would have generated. These product and process innovations do not occur in a vacuum but require organizational changes that enhance coordination and reward efficiency. Multispecialty medical groups, IPAs, practice management firms, and physician-hospital systems can be interpreted as organizational responses to the potential rewards for cost-decreasing clinical innovation. Each faces significant limitations and all are subject to continued pressure toward evolution or extinction, but they exemplify the process of organizational experimentation that has been unleashed by the transition to unmanaged competition in health care.

The corporate system of health care demonstrates daily its economic superiority over the traditional system of professional dominance and the only partially implemented systems of utility regulation and managed competition. But the long-term viability of an organizational system depends not merely on its economic prowess but also on its compatibility with the social culture and political institutions. The professional guild persisted for decades, despite changes in demography, epidemiology, and technology, due to its nostalgic appeal and financial support for legislative powerbrokers. In overturning so many traditional practices and expectations in such a short period, corporate health care has brought down upon itself the wrath of the American populist heritage that distrusts big business almost as much as it dislikes big government. The third fundamental feature of the emerging system, therefore, is continued social discontent and political backlash. There will be no reversion to utility commissions or to managed competition. But legislatures, courts, attorneys general, and administrative agencies have unleashed a torrent of hostile legislation, litigation, and regulation. Some of these impose beneficial supports for the corporate system, mandating grievance and review, financial solvency, and quality-monitoring mechanisms that enhance ac-

countability and legitimacy. Others, however, target the very engine of innovation, impeding or prohibiting new methods of payment, utilization management, benefit design, network contracting, capital financing, and organizational affiliation.

With the dawn of the new century the fate of corporate medicine still lies in the balance. The more remarkable its economic performance, the more social friction the new system engenders and the more political resistance it faces. Corporate health care relives the history of the larger corporate system, whose economic success engendered waves of populist hostility which came to be embedded in antitrust statutes and utility commissions.<sup>1</sup> Through its economic dynamism, the corporate system seems to undermine the social and political basis of its own support. Historically it has been sustained less by its own efforts than by the poor economic performance and weak cultural legitimacy of its regulatory antagonists. The fate of the corporate system of health care similarly will depend on the flux of aspirations and antipathies within the American people.

#### THE LESSONS OF UTILITY REGULATION AND DEREGULATION

In peering into the future of medicine we can claim no certainties and propose no panaceas. No nation has ever unleashed the forces of market competition and corporate organization on its health care system. Insights are potentially available, however, from the experiences of the transportation, communication, energy, and banking industries. For decades subject to comprehensive regulation of entry and exit, capacity and investment, price and profit, service and quality, these industries have been opened to competition and its consequences. Despite differences in physical technology, geographic concentration, and consumer demand, the experiences of the utility industries under partial and total deregulation have been broadly similar. We now have a substantial body of research from the airlines, trucking, railroad, banking, and natural gas industries, plus less comprehensive evidence from telecommunications, electric power, and cable television. The experiences from these sectors will not be replicated precisely in health care but can provide useful guideposts and standards of comparison. Indeed, the utility industries are potentially more relevant to the emerging health care system than the oft-cited experiences of health care in other nations, which evolved in different cultural contexts and under different political institutions.

The deregulation of the utility industries has been remarkable for the breadth of the industries affected and the depth of the changes effected, but also because it was so unanticipated. Scholars and industry observers have diverged widely in their assessment of the economic desirability of regulation but converged in their assessment of its political durability. Liberals often interpreted regulation as an efficiency-enhancing response to market failure and as an equity-enhancing means of subsidizing the poor; they argued that enlightened public policy would protect utility regulation as an important legacy of the New Deal era. Conservatives often denounced utility commissions as captured by the regulated industries, and hence as conducive to inefficiency and inequity. But by this very token many despaired of mobilizing a political constituency for change, since the beneficiaries of regulation are concentrated and committed while the losers are dispersed and apathetic. But over the course of the 1960s, during the era of its apparent invincibility, utility regulation was subjected to a sustained critique from both the left and the right that created an intellectual quasi-consensus and prepared the way for sweeping change in the following decades.

The new consensus, shared in diverse ways by consumer activist Ralph Nader and Nobel laureate George Stigler, by Senator Kennedy and President Reagan, was that utility regulation exacerbates rather than attenuates economic inefficiencies and social inequities. The inefficiencies stem from incentive distortions induced by particular rules and from the general climate of a protected, noncompetitive industry. Regulatory pathologies were identified in the airline industry, where price floors stimulated cost-increasing competition through amenities and flight frequency;<sup>2</sup> in the electric power industry, where rate-of-return limits induced a substitution of capital for labor and the construction of overly large generating facilities;<sup>3</sup> in the railroad industry, where restrictions on track abandonment led to excess capacity, undermaintenance, and demands for public subsidy;<sup>4</sup> in the banking industry, where constraints on product and market diversification limited the number and type of financial instruments and protected inefficient and poorly managed firms;<sup>5</sup> and in the natural gas industry, where uniform rates prevented conservation-enhancing seasonal and time-of-day pricing.<sup>6</sup> Barriers to market entry, product diversification, and corporate mergers protected incumbent firms against the rigors of competition, fostered managerial slack, financed above-market wages, and discouraged innovation in methods of production, supply, and marketing. The distributional impact of regulation derives from its attentiveness to mobilized political constitu-

cies and its insulation from the larger but less vocal majority. Simplistic theories of agency capture by regulated industries failed to acknowledge the full complexity of regulatory politics, in which consumer groups, legislators, and litigators all play important roles, but did succeed in dispelling even more simplistic interpretations of regulation as a means to tax the rich and help the poor.<sup>7</sup> Not surprisingly, the greatest defenders of continued regulation were not the disenfranchised but the regulated firms themselves, backed by their investors, bankers, labor unions, executives, and employees.

Deregulation is not a one-time event but rather a process that unfolds in different ways across industries and geographic markets, generates instability and stress, and is threatened continually by political reaction and re-regulation. Based on the industry experiences and research evidence to date, four basic impacts can be identified.<sup>8</sup> Deregulation in the utility industries has stimulated productivity and performance, with significant reductions in cost and improvements in service. It has led to differentiation among product features and prices depending on the purchaser, the geographic market, the season, and other characteristics of supply and demand. The relaxation of restrictions on new entry has led to dramatic changes in market structures, organizational forms, distribution networks, and methods of purchasing. Finally, deregulation has engendered countervailing pressures to slow the pace and reverse the direction of change, to dampen the instability and impede the innovation, to cushion the blow to previously favored constituencies, and in some cases to re-regulate in whole or in part the behavior of the industry. Let us consider each of these in turn.

#### UTILITY DEREGULATION: COST AND QUALITY

The most visible impact of deregulation has been to lower prices and improve service to consumers.<sup>9</sup> After adjusting for economy-wide inflation, deregulation has reduced fares per mile traveled by 33 percent for airlines, 35 percent for less-than-truckload freight, 75 percent for full-truckload shipping, and 50 percent for railroads. Natural gas prices have fallen 30 percent for both residential and industrial users. Service frequency has increased substantially in air transportation, due to lower fares and higher demand; service times have declined substantially for less-than-truckload and full-truckload shipping; both the mean and standard deviation of railroad transit times have fallen by approximately 20 percent; banking is more convenient due to longer hours, automatic

tellers, and no restrictions on branching; natural gas service is more reliable as shortages have been eliminated.

Higher value to the consumer has derived from improved industry productivity, capacity utilization, and network configurations and from a virtuous cycle of lower costs, lower prices, increased demand, and further reductions in costs. The hub-and-spoke route configuration developed by the deregulated airline industry has raised rates of seat occupancy from 52 percent to 62 percent and thereby lowered costs per mile flown by 25 percent. Fare wars have driven down air fares, dramatically increased business and leisure air travel, and permitted ever more frequent flights.<sup>10</sup> The trucking industry has increased the percentage of full truckloads and reduced the number of empty return miles, thereby permitting price reductions that have attracted additional business from nontrucking firms that previously shipped on their own vehicles to avoid the costs of trucking regulation. Railroads have abandoned approximately one-third of their trackage, reduced operating costs, improved profitability, and thereby escaped from the regulation-induced death spiral of mandated excess capacity, high operating costs, high prices, declining demand, and need for ever greater subsidy. Banks have lowered their operating costs through extended electronic and branch banking, raised interest rates above regulatory ceilings, and developed new financial products that better balance risk and return. Natural gas firms have restructured their transmission and distribution networks and improved pipeline capacity utilization, reducing overall operating and maintenance expenses by 35 percent.

#### UTILITY DEREGULATION: PRICE AND PRODUCT DIFFERENTIATION

A common characteristic of utility regulation was uniformity in products and prices in the face of great variability in consumer preferences and the actual costs of providing service. This one-size-fits-all approach led to services that were of excessive cost for some consumers and insufficient quality for others, impeded the use of price flexibility to enhance capacity utilization, and juxtaposed overcapacity and low load factors in some industries with undercapacity and shortages elsewhere. It generated cross-subsidies from consumers for whom the cost of service was low to consumers for whom the cost of service was high. Shippers on heavily traveled routes subsidized shippers on remote routes; vacation airplane travelers with flexible schedules subsidized business

travelers with last-minute schedules; long-distance telephone users subsidized local callers.

Deregulation has spurred an outpouring of new services that incur different costs and impose different prices, permitting a better match between supply and demand. Air travelers can obtain substantial discounts if they purchase tickets in advance and stay for the weekend, but must pay the full cost of standby capacity if they want to delay their decisions to the last minute. Shippers can obtain low rates if they allow their freight to be combined with others' and be routed over less direct but more heavily traveled corridors, or can choose to pay the full cost of less-than-truckload delivery. The increased variability in price and service results in part from the deregulation of contracting between buyers and sellers. Rail and road regulation, for example, often prohibited shippers from negotiating with transporters for volume discounts, flexibility factors, multimarket or multiyear agreements, or other variations from uniform price and service standards. Now half of rail freight moves at specially contracted rates, allowing better track utilization for the railroads and better coordination of production, inventory, and distribution for the shippers. The adoption by American manufacturers of Japanese "just-in-time" inventory and assembly methods would not be possible without the ability to negotiate precise volumes and times of delivery. Deregulation permits the contractual flexibility that allows buyers and sellers to explore potential gains from new electronic and information technologies, thereby accelerating the adoption and diffusion of innovation.

Pricing has become highly variegated by time of day, time of year, and time of delivery to accommodate fluctuations in capacity utilization. Telephone users obtain lower rates if they call on evenings or weekends; natural gas is shipped at lower prices at off-peak hours and seasons; frequent travelers are awarded mileage bonuses that help airlines fill seats that otherwise would have gone empty. Deregulated prices now more closely accord with the variable cost of providing service to particular customers in particular markets. University endowments and mutual funds obtain volume discounts through lower brokerage fees than small investors; shippers with regular and predictable volume obtain lower prices than those with irregular and unpredictable demand; travelers using small aircraft to fly between rural communities pay more than travelers using wide-bodied aircraft on trunk routes. Changes in relative pricing to reflect relative costs have sharply reduced the cross-subsidies among consumers and communities that prevailed under regulation. For some products and customers prices have increased, frequency has de-

creased, and service has deteriorated despite the industry-wide improvements in cost and quality. Deregulation also has hurt producer and provider interests that benefited from restrictions on new entry and price competition. The unequal distribution of costs and benefits under regulation was rendered invisible through long familiarity, while the new configuration of costs and benefits is highly visible.

#### UTILITY DEREGULATION: MARKET AND ORGANIZATIONAL STRUCTURES

Deregulation stimulates competitive entry into previously protected industries and local markets. Start-ups challenged the most prominent firms in airlines, trucking, electric power, and telecommunications and even have appeared in specialized niches of the railroad industry. After an initial turbulent phase, however, deregulated industries undergo a process of concentration through merger, acquisition, market exit, and bankruptcy. Airlines, railroads, and banking firms are almost all larger now than prior to deregulation, and we witness an apparently similar wave of consolidation in the electric power and telecommunications sectors. Deregulation has spurred exit from particular product and geographic markets as firms have pulled out, sold out, or gone under in the face of new entry. Much of this was overdue, since regulation protected incumbents from more efficient and innovative outsiders. Large scale is not incompatible with the most intense competition, as much growth has occurred through product and market diversification. Measured at the national level, the number of firms is smaller and the size of firms is larger, but measured at the local market level the number of potential competitors is larger and the intensity of competition is fiercer.

Some firms have grown by developing broader networks that better fit the needs and preferences of customers. Airlines have thickened their regional nets by servicing more communities around their hubs and have developed joint venture and contractual arrangements to service global demand. Railroads have merged end-to-end to more efficiently link ports to mines to manufacturing centers, and have purchased or developed contractual affiliations with maritime shipping firms and trucking companies to offer intermodal transport services. Many mergers and acquisitions are designed to penetrate new geographic markets, as in branch banking and local service telecommunications, or to penetrate new product markets, as in linkages between commercial banks, investment banks, and stock brokerages. Substitution stimulates rivalry for traditional ser-

vices and their producers. Mutual funds, corporate lenders, life insurers, and other financial intermediaries now compete with savings and loan institutions for deposits. Of course some consolidation is designed to reduce rather than increase competition. While end-to-end mergers increase rivalry in the railroad industry, parallel mergers decrease it. Airlines dominant at particular hubs can exploit the shortage in airport capacity to exclude rivals and raise rates. But all in all the utility industries have become increasingly competitive as the deregulatory process has unfolded, even in what were formerly considered natural monopolies such as electric power and telecommunications. The strategy of full-service diversification, driven by the heterogeneity of preferences, technology, and geography within particular industries, leads to the creation of large firms competing fiercely across many products and many markets.

#### UTILITY DEREGULATION: POLITICAL BACKLASH

Deregulation has exerted a major impact on the political climate of the utility industries, in some cases stimulating a backlash that finds sympathetic ears in legislatures and the courts. Formerly subsidized consumers deplore market-level price and quality. Airline pilots, unionized teamsters, stock brokers charging fixed commissions, employees of power companies with cost-plus rate structures, and domestic crews on U.S.-owned ships all have experienced the reduction in industry costs as a reduction in personal incomes. Americans as a whole are winners, with more choices, better service, and lower prices, but significant subgroups find themselves to be losers. Everyone appreciates price decreases and quality increases in services where regulation offered neither subsidy nor shelter. We lament, however, similar effects in industries where we were protected and pampered. The political backlash has been weak in industries where winners are organized while losers are dispersed. But the controversy festers where winners are dispersed and losers are mobilized. Here are heard the most insistent denunciations of competition and the most strident demands for renewed regulation.

The consumer and producer backlash against utility deregulation has found sympathetic ears in Congress, state legislatures, and executive agencies due to the structure of political incentives and institutions. Legislators look not to the aggregate social impacts of deregulation but to the costs and benefits accruing to their local constituents. They seek to slow, stop, and reverse adverse impacts, such as the abandonment of little-used railroad trackage, competitive threats to hometown truckers, and

the transfer of jobs to distant communities. Elected politicians and appointed administrators are concerned with short-run rather than long-run effects and are uncomfortable with the instability created as deregulation opens long-protected industries to entry and innovation. All three branches of government are under continual pressure to do no direct harm, to minimize adverse impacts on the visible and vocal at the expense of the invisible and inarticulate, thereby upholding perceived standards of due process while rewarding the politically most powerful interests.

The process of deregulation has generated considerable friction but has not been reversed, with partial exceptions in the cable television and electric power sectors, due to large short-run benefits that have diffused the pressures for re-regulation. Indeed, the deregulatory process has spread to previously untouched industries and previously unconvinced nations, as local phone service sees the first glimmerings of competition, global maritime and airline regulations are loosened, and European nations reexamine their internal telecommunications and transportation policies. Over time, moreover, deregulation creates a constituency in its own support, as producers, consumers, and communities advantaged by the changes mobilize against re-regulatory initiatives. Nevertheless, the process is fragile and always endangered. Utility deregulation depends on the political as well as the economic marketplace, on the temporal and geographic incidence of costs and benefits, on the comparative salience of winners and losers, and on the likelihood that demagogues will find in the turbulence of change the opportunity to pursue other agendas.

#### COMPARING HEALTH CARE WITH THE UTILITY INDUSTRIES

No exact analogies can be drawn between the changes sweeping through health care and the revolutionary transformations spurred by deregulation in the transportation, communication, energy, and finance industries. Health care was never subjected in such an explicit and comprehensive fashion to the dictates of a utility commission. A few states imposed rate regulations affecting all hospital patients, many experimented with price controls covering a subset of insurers, and all imposed certificate-of-need entry barriers for at least some services and facilities. The Medicare program imposed a uniformly administered hospital pricing system for its patients, and many states imposed Medicaid payment rates that were based on budgetary politics rather than any reasonable analysis of the true cost of care. But the performance of the traditional

health care system so closely resembled a regulated utility, and health care competition has affected performance in ways so similar to utility deregulation, that significant commonalities must be acknowledged and important lessons can be learned.

The traditional system of health care exhibited many of the telltale signs of utility regulation: barriers to entry and exit, absence of price competition, vigorous nonprice rivalry, excess investment and overcapacity in some sectors, capital shortage and undercapacity in others. These pathologies stemmed in large part from the very visible hand of federal and state government in the financing, mandating, and monitoring of care. Public payers account for half of industry revenues and until recently frowned on principles of market contracting in favor of administered prices and performance. Health plans and providers that reduced their costs could not obtain the usual market reward of greater demand from price-sensitive purchasers. Public policy embraced the indemnity structure of traditional health insurance, subsidizing it in the private sector through the uncapped tax exclusion and imposing it in the public sector through the fee-for-service structure of Medicare and Medicaid. Indemnity insurance imposes a 100 percent tax on cost-reducing innovation but rewards cost-increasing innovations and amenities by reimbursing every new product and procedure with a new payment. State legislatures strived to impose a uniformly high cost, high coverage standard on insurance benefits by mandating the coverage of whichever services, facilities, and devices could muster a potent political lobby. Barriers to entry and exit derived not merely from explicit certificate-of-need statutes but from legislated bans on for-profit hospitals, prepaid group practices, limited provider networks, and other organizational challenges to the status quo. The medical profession was for decades exempt from oversight by the antitrust agencies, and local judges still wink at anti-competitive hospital activities under the dubious theory that nonprofit monopolies will not exploit bargaining leverage to finance their vision of the social good. All in all, the utility ethos was pervasive in traditional health care. Whatever moved was to be taxed, whatever moved quickly was to be regulated, and whatever did not move was to be bailed out.

#### HEALTH CARE: COST AND QUALITY

Market competition and corporate organization already have demonstrated a remarkable ability to moderate the inflationary trajectory.<sup>11</sup>

The development of medical groups, health care systems, multiproduct insurers, capitation contracting, and utilization management during the 1990s held the growth in health care costs to the lowest levels in 50 years, confounding the skeptics and contributing to the strong economic performance of the decade. It is difficult to ascertain the influence of corporate organization on health care quality, due to the inherent difficulties in measuring outcomes and to the lack of preexisting baselines for comparison. The overall quality of care is improving, but this is due primarily to longer trends in laboratory and clinical research, physician training, and technology diffusion than to recent changes in markets and organization. The record on customer service is decidedly mixed. Cost pressures have led to a shortening of physician visits and oversight of utilization patterns that patients resent, while the new emphasis on satisfaction surveys and enhancement has induced providers to offer longer office hours, 24-hour telephone advice, and other consumer conveniences.

The short-term success against health care cost inflation does not imply that the long-term battle for stable expenditures has been won. On the contrary, Americans are poised to enjoy the clinical benefits but rue the budgetary implications of an outpouring of new drugs, devices, tests, and treatments that prevent infection, dispel uncertainty, enhance functional ability, and generally contribute to a healthier and more long-lived citizenry. This technological dynamic opens diagnostic and therapeutic opportunities that are hard to ignore, but is less important perhaps than the revolution of rising expectations. It is clear that as the population gets healthier it demands more, not less, from its medical care system. We embrace treatments for old ailments that once were merely suffered, from childhood viruses and rashes through migraine headaches and springtime allergies to the impotence and arthritis of our golden years. We open our hearts and our wallets to medical breakthroughs that offer life and dignity to victims of the great scourges of our time, from childhood cancer through AIDS to Alzheimer's. We take gains in longevity for granted, expect that full physical, social, and intellectual functioning will continue to the now more distant end, and insist that these advances are for all to share.

The corporate system does not seek to stop the development of quality-increasing technology or to quell the revolution of consumer expectations, both of which inevitably accompany the growing wealth of society. It does, however, create significant changes in economic incentives and organizational structures that will temper the rate of inflation and

enhance the overall value of health care services in a manner analogous to the gains in efficiency and quality in the deregulated utility industries. Four dimensions are particularly worthy of note.

The shift from the professional guild to integrated organization, from indemnity insurance to managed care, and from nonprice rivalry to price competition creates strong economic rewards for the diffusion of cost-decreasing clinical innovations. The medical arms race rewarded the development of technologies that raised quality, real or perceived, but not ones that reduced costs. Now firms and individuals at every point along the health care value chain, from bench scientists to clinical researchers, pharmaceutical manufacturers, hospital managers, multispecialty medical groups, single-specialty networks, and primary care physicians can increase their status and income if they discover, develop, or adopt interventions that reduce the overall expense of care. Market competition and corporate organization in nonhealth industries stimulate innovations that are productivity-enhancing and hence cost-reducing. This same dynamic will appear in medicine. These efficiency-enhancing innovations will lower the costs of some forms of medical care and thereby make it easier for the nation to finance the adoption of other innovations that raise costs as a byproduct of raising quality.

The corporate system rapidly is restoring the normal economic relationship between supply and demand, between market disequilibrium and price changes in health care. The United States has inherited an excess supply of acute care hospitals and physician specialists, analogous to the excess capacity generated by entry and exit regulation in many utility industries. In the now passing system of guild organization and indemnity insurance, excess capacity stimulated cost-increasing nonprice competition analogous to that experienced by the rate-regulated airline industry. Health services researchers delighted in discovering ever new economic pathologies, from Roemer's Law that a built bed is a filled bed, to the medical arms race of duplicative clinical technology, to supplier-induced demand in response to physician fee reductions. Henceforth facilities and services that are in excess supply will receive lower, rather than higher, prices than otherwise comparable facilities and services that enjoy excess demand. The painful recalibration of relative incomes within the profession and across the industry will continue, redirecting investments and career choices toward areas of need rather than areas of excess.

The original demand placed on the corporate system by public and private purchasers was to reduce the cost of care, not to improve qual-

ity and service, and the system responded accordingly. The greatest emphasis in the early years has been on methods of payment, network contracting, utilization management, benefit design, and organizational structure that promise to restrain the inflationary spiral. Considerable success has been achieved in this endeavor. But the American question remains: what have you done for me lately? Patients are worried lest the emphasis on cost control reduce the quality of the care they receive. Consumers are annoyed with every obstacle to obtaining what they want when they want it. The corporate system is shifting its emphasis to developing methods for measuring and improving service, in a manner analogous to the process pursued in the utility industries after deregulation. For the first time, the health care industry is being subjected to systematic monitoring of quality and service levels, with the intent of promoting clinical comparisons and quality-conscious consumer choice. The road to be traveled is a difficult one, since almost all the monitoring tools need to be invented. A salient feature of the professional guild was reliance on unmonitored trust and opposition to quantitative, validated measures of performance. Purchasers, plans, and provider organizations now experiment with satisfaction surveys, indicators of preventive services utilization, tracers for appropriate clinical processes, and risk-adjusted measures of patient outcomes. This process is unfolding according to the etiquette of the corporate system, with considerable duplication, turbulence, and controversy. Critics can point to yet another form of administrative waste and argue that a fully regulated system would impose a uniform method for monitoring quality. But the erstwhile professional system, whether regulated or unregulated, imposed no systematic quality measurement of any kind. The new monitoring mechanisms hold great potential to enhance as well as simply measure the quality of care, since statistical and epidemiological methods always outperform bad-apple approaches to quality improvement. The conceptual framework and empirical methods of continuous quality improvement have diffused from their Japanese pioneers to American manufacturing and ultimately will take hold in American medicine.

Deregulation has not universally improved quality and service in the utility industries. We all bemoan the paucity of empty seats on the airlines or the ubiquity of small fees for banking services that once were offered free. Some forms of regulation imposed a uniformly high cost, high quality style of service by forbidding firms from developing economy options. Without the ability to attract customers through lower prices, airlines added flights that they knew would be half-empty and financial

institutions offered white-glove service to those customers who could come in during bankers' hours. Deregulation in these contexts led initially to a reduction in service as a byproduct of an even greater reduction in price. But the value offered to the customer, defined as including both service and price, increased. Most of us are willing to put up with strangers in adjacent seats in order to obtain economy fares and, for those who are not, the airlines offer business class service. Similarly, the corporate system of health care will experiment with different combinations of price and service to find the mix that offers best value in the mind of the consumer. There are trade-offs to be made between broad and narrow provider networks, stringent and loose utilization management, thick and thin benefit coverage, high deductible and first-dollar cost sharing, and, of course, between connoisseur class and economy prices. The trade-offs are more controversial in health care than in the utility industries since the benefits of elite service accrue to the patient while the benefits of low cost often accrue to the employer or taxpayer. But in every case, for every self-paid insurance package, employer-paid fringe benefit, or tax-paid entitlement program, the corporate system will seek the best value in service and price, since that is the only sustainable method for retaining the customer.

#### HEALTH CARE: PRICE AND PRODUCT DIFFERENTIATION

Generations of reformers have sought to overcome the variability in health care demand and supply through uniform benefits, premiums, and prices that do not vary according to incomes, preferences, health, location, employment, or other characteristics of consumers and producers. In the absence of strong governmental controls, however, the heterogeneity among consumers in what they are willing to buy and among providers in what they are willing to sell is driving a thoroughgoing price and product differentiation in health care. Benefit coverage and network design, premiums and prices, and method of marketing and distribution now are highly variegated and promise to become ever more so.

The defeat of President Clinton's Health Security Act spelled the demise of the uniform benefit package as the foundation of health care policy in the United States. Simply put, those who currently enjoy rich benefits and low premiums, due to good subsidies, good health, or good luck, are unwilling to sacrifice anything so that the less endowed, healthy, or fortunate can come up to their level. A uniform benefit package suffi-

ciently rich to be politically acceptable to the voter would be economically unacceptable to the taxpayer. The unstandardized marketplace is responding to the diversity in incomes and preferences through a wide variety of benefit packages, cost-sharing provisions, network configurations, and methods of utilization management. Self-employed individuals and small firms now can shop from a long menu of options, with inclusion, exclusion, or partial coverage for prescription drugs, mental health services, rehabilitation therapy, and complementary medicine, with different levels of cost sharing, and with combinations of deductibles and copayments for particular services. Large public and private purchasers demand idiosyncratic benefit configurations, reminding the health plans and providers that those who pay the piper call the tune. Network designs are proliferating at an equally astonishing rate, mixing and matching PPO and HMO components, gatekeepers and self-referral, prior authorization and retrospective profiling, out-of-network wraparounds and out-of-area expansions. The three-letter acronyms that once anchored our understanding of health insurance alternatives are rapidly becoming untethered as the industry crafts hybrid strains in a dizzying display of product engineering.

Premiums and prices have lost whatever uniformity they once possessed, with community-rating and standard methods of capitation and fee-for-service being swept aside by the market imperative to vary prices according to underlying variations in costs. Consumers choosing rich benefit packages, loose network designs, and patrician physician practices find themselves paying substantially more than those content with thinner benefits, more tightly managed access, and community-based practitioners. Public and private sponsors are continuing their slow and painful transition from defined benefits to defined contributions, paying a fixed dollar amount rather than encouraging costly choices through higher subsidies. In a competitive market each product must be priced to be self-supporting, since cross-subsidies invite new entry that appeals to the overcharged customers. The diverse options in benefit and network design are reflected in actuarially sound, and hence diverse, price levels. Insurance premiums and provider payments will increasingly reflect the health status and cost of care required by the individual enrollee and patient. Risk-adjusted prices are desirable since they remove incentives to cherry-pick the healthy and avoid the ill. They are essential for the continued economic viability of safety-net providers who attract the sickest patients due to their geographic location or open-door policy. In the absence of risk-adjusted subsidies, market competition will shift the

economic burden of illness onto the ill while allowing the healthy to pay for only their modest medical needs. The United States currently maintains a tattered fabric of risk-adjusted subsidies, with employer-paid benefits, government entitlement programs, and the health insurance tax deduction allocating greater sums for sick than for healthy citizens. But the system has many loopholes and exceptions. Competitive markets and corporate organizations in health care would benefit from a well-designed and well-financed system of risk subsidies, since this would eliminate the pressure to deny coverage and would convert charity cases into paying customers. But steps in this direction are difficult since they would violate the ban on new taxes, which is one manifestation of the “do no direct harm” principle in contemporary politics.

The marketing of health care is becoming quite differentiated and methods of branding, distributing, and selling are becoming key competitive skills for health plans and provider organizations. It is increasingly hard to imagine that all Americans one day will pick up their health insurance at the local Social Security office or be channeled through a corporate open enrollment process. Consumers obtain their information and options through brokers and agents, private and public employers, state insurance pools and Medicaid agencies, federal Medicare and military programs, and myriad other options. The industry is pioneering ever new ways of connecting buyers and sellers, including print and electronic media, direct mail and the Internet, community organizations and consumer cooperatives. Through it all the American consumer reigns sovereign over a complete menu of choices, chaos of opportunities, and cacophony of sales pitches promising a product as unique as the individual and as affordable as the alternative.

#### HEALTH CARE: MARKET AND ORGANIZATIONAL STRUCTURES

We are witnessing massive changes in the structure of health care markets and organizations. Many of today's most prominent organizational forms, such as independent practice associations and physician-hospital organizations, were difficult to find 20 years ago. Multispecialty medical groups have a long and illustrious history in some communities but have been thoroughly transformed by the marketplace shift toward managed care. Preferred provider insurance displaced indemnity and the network HMOs displaced their staff-model progenitors only in the 1990s. Forms of contracting are in a state of ferment, with payment methods that bor-

row from both capitation and fee-for-service and methods of utilization management that compromise between arms-length review and full delimitation. Organizations are becoming larger and more complex through merger, acquisition, and product diversification. But increased scale is stimulating competition rather than cartels as local barriers fail to impede entry by multiproduct, multimarket firms.

The most visible feature of the corporate system of health care is ceaseless acquisition and divestiture, integration and outsourcing, combination and recombination. Medical groups, hospital systems, and health plans are coming together and then coming apart, substituting contract for joint ownership, creating diversified conglomerates and refocused facilities, and experimenting with ever new structures of ownership, finance, governance, and management. After decades in which medicine was frozen into a cottage industry of solo physician practices, freestanding community hospitals, and single-state Blue Cross insurers, incumbents and upstarts are pushing boundaries in ways once not merely infeasible but unthinkable. They are exploring potential economies of scale, the advantages offered by large size in insurance risk bearing, administrative efficiencies, and vendor contracting, but also the diseconomies that accompany the attenuation of individual incentives and accentuation of influence politics. Firms are exploring the economies and diseconomies of scope, the trade-offs between conglomerate versus staff-and-line organization, broad-spectrum versus niche positioning, transfer versus market pricing, diversification versus product focus, coordination versus clinical specialization. They seek some middle ground between the extremes of vertical integration and spot contracting, some balance of coordinated and autonomous adaptation in the face of ever new challenges.

This process of trial and error is generating a diversity rather than uniformity of organizations and contracts. The heterogeneity of regional providers and purchasers, technologies and transactions, economics and demographics, popular cultures and political institutions supports an enduring variety in the health care marketplace. We observe striking cross-market and within-market differences in methods of payment, medical management, data reporting, and quality accountability. Some physician communities are characterized by multispecialty medical groups, others by more loosely structured IPAs, and others by a continuing diaspora of unaffiliated practices. For-profit hospital chains hold a strong position in some communities, while others are dominated by large non-profit systems and the remainder cling to hometown facilities. Different

regions favor different mixes of HMO, PPO, and hybrid insurance products. This heterogeneity stems both from enduring regional characteristics and from transient differences in each community's place on the health care learning curve, as experiments that succeed in one locality are copied in others.

The structure and performance of local health care markets oscillates between the most vigorous competition and the incipient cartel. Medical groups, hospital systems, and health plans want to avoid the rigors of competition by acquiring or merging with their rivals, seeking oligopoly and ultimately monopoly power to dictate prices and protect profits. But accomplishment seems ever to lag behind aspiration, as purchasers, suppliers, substitute services, and entrepreneurial outsiders compete for their share of those potential monopoly profits. The organizational diversification of health plans and providers has created a ravenous crowd of well-financed and battle-hardened competitors able to jump into new products and new markets when revenue opportunities arise. Entry barriers are lower, not higher, than in the bygone era when the professional guild boycotted group practices, fixed prices, restricted advertising, enforced any-willing-provider laws, and banned the corporate practice of medicine. The cottage industry structure of yesteryear lent itself well to the most thoroughgoing anticompetitive practices, while the large corporate organizations, consolidated industry structures, and complex contractual relationships of today lend themselves to the most vigorous competition ever observed in health care.

### HEALTH CARE: POLITICAL BACKLASH

The political backlash against competitive markets and corporate organization in health care has far exceeded the reaction against deregulation in the utility industries. The success against cost inflation has produced large savings for employers and governmental programs but little visible benefit to individual employees and taxpayers. Had the rate of inflation that prevailed in the five years prior to the defeat of President Clinton's Health Security Act continued for the five years following that landmark event, health care costs and premiums at the end of the decade would have been twice their actual levels, creating dire personal hardships, acrimonious tax politics, and conflictual labor relations. But the transition to a market-driven health care system coincided with an acceleration of trends away from paternalistic employment policies and welfare state politics. Many employees experienced the stabilization or

decline in overall premiums as an increase in their paycheck deductions and compared unfavorably the network restrictions and utilization oversight of managed care with the halcyon days of first-dollar indemnity insurance.

Consumer concerns have been accompanied and encouraged by an even stronger producer backlash against the changing market and organizational structures in health care. Hospital employees and their labor unions are dismayed to note the shift in jobs from unionized inpatient settings to often nonunion ambulatory, subacute, and home health settings. Medical specialists resent the new tilt in status and income toward primary care. Physician earnings have continued to rise but at a slower pace and in a much more uneven pattern than in the era of cost-unsconscious consumer demand. Medical groups and hospital systems impose a degree of administrative oversight, peer review, and public accountability that feels foreign and uncomfortable to clinical miracle-workers. Caregivers resent the budgetary constraints necessary for financial solvency as unwarranted incursions on their clinical autonomy. Specialty societies, labor unions, manufacturers of medical devices, and all the other constituents of the medical-industrial complex have mobilized in defense of their economic self-interest, naturally explaining their behavior as a defense of patient rights and the quality of care.

The number of uninsured and underinsured Americans grew during the 1990s, despite the moderation in premiums and prices. The savings from private sector cost control accrued first to employers and thence to employees through higher wages and to consumers through lower prices. Public sector cost savings accrued first to governmental programs and thence to taxpayers through budgetary surpluses and forgone tax increases. Health care cost control contributed to the macroeconomic prosperity of the era, with buoyant consumer demand, strong private investment, and expansionary fiscal policy. But the savings were not gathered together and channeled into health insurance for the uninsured, despite modest efforts targeted at children and other especially deserving groups. The lack of universal insurance coverage is a major blemish on the American polity and the Achilles' heel of the corporate system of health care. Its manifest inequities and inefficiencies provide continuing fuel for populist sentiments that interpret large organizations and competitive markets as somehow responsible for the callous disregard by many citizens for their less fortunate compatriots. Inadequate insurance fosters the non sequitor that since governmental mechanisms are necessary to subsidize insurance for the poor then governmental mechanisms

are necessary to command and control the day-to-day operations of the health care delivery system.

The consumer and producer backlash against the health care equivalent of utility deregulation threatens to do much mischief but also may foster the checks and balances necessary for the sustained viability of the new system. Rules are needed for every game; some form of oversight is needed for every market. Utility commissions and statutory compulsions were not replaced by *laissez faire* in the transportation, communications, and finance industries but by a mix of disclosure mandates, safety standards, financial reserve requirements, and other safeguards that protect the public interest with a hand somewhat less visible than before. By analogy, mechanisms of oversight and accountability are beneficial and indeed essential for the corporate system of health care.

A salient characteristic of medicine is the clinical uncertainty of each individual's diagnosis and appropriate treatment. It is essential that administratively efficient and socially acceptable mechanisms be developed for reviewing, adjudicating, and appealing differences concerning benefit coverage, experimental treatment, and medical necessity. These mechanisms must be sufficiently close to the clinical interface to produce informed and timely outcomes but be sufficiently independent to claim a broader legitimacy. The system will need to grope to some workable mix of mediation, arbitration, and litigation to resolve differences in what is an inherently stressful and complex decision-making arena.

Health insurance involves the collecting of premiums and subsequent paying of claims in a manner that invariably raises the possibility of overextension and insolvency. State insurance departments traditionally regulated indemnity, Blue Cross, and HMO carriers but have been outstripped by the geographic expansion, product diversification, and capitation contracting of the industry. The locus of administrative control and the incidence of risk is no longer clear in health plans that operate in multiple states, offer multiple network designs, and sell every form of insurance, partial insurance, and reinsurance. Private employers and public agencies with self-insured fringe benefits programs escape state regulatory oversight altogether. Medical groups, physician practice management firms, and physician-hospital systems cover capitated populations larger than the enrollments in some insurance companies yet are often exempt from formal insurance regulation. The emerging system needs to revisit the nuts and bolts of tangible net equity, liquidity ratios, and other means for ensuring that the money paid at the beginning

of the year is still available to cover the stream of claims that trickle in at the end.

The emerging health care system has pioneered new methods for the collection, dissemination, and comparison of data on customer service and clinical quality. The progress to date has been frustratingly slow but has laid the foundation for more specific, severity-adjusted, and outcomes-oriented measures in the future. This is an arena with important roles for public agencies that can mandate participation, for nonprofit organizations that can develop the instruments, and for health plans and providers who can cooperate on data collection and compete on quality results. The proliferation of print, television, and Internet avenues for the dissemination of quality and service data repeats the experience of the deregulated utility industries, where the rise of choice and competition created a new demand and thereby spurred a new supply of information to consumers.

Competition appears to be replacing collusion as the *modus operandi* of the emerging health care marketplace. But caution is necessary lest the ever present urge to merge not create cartels in local physician, hospital, or insurance markets. Antitrust law constitutes a form of regulation subject to its own excesses and abuses but nevertheless serves as an important support for a competitive economy. It is particularly important in health care. The long record of landmark antitrust cases bears ample witness to the anticompetitive and anticonsumer proclivities of medical societies, nonprofit hospitals, Blue Cross insurers, and other purportedly beneficent entities as well as the more usual cast of for-profit suspects. The tendency to consolidate into local cartels will grow as the pressure on health care revenues intensifies and is already perceptible in the behavior of some medical groups and many physician-hospital organizations. Vigilant oversight and vigorous enforcement by the antitrust agencies will be necessary at times to dissuade would-be monopolies from pursuing their dreams.

#### THE CORPORATE PRACTICE OF MEDICINE

The corporate health care system has adopted forms of organization, ownership, and contracting from the most dynamic sectors of the larger economy and applied them to the technology, culture, and institutions of medicine. Its foundations lie in the multispecialty and network medical groups that realign economic incentives and redesign clinical practice at

the grassroots level. Medical groups offer a balance of competition and cooperation that accommodates the social needs for efficiency, adaptation, and innovation. The now passing guild of autonomous physician practices and informal referral networks offered only a cost-increasing form of service competition and impeded clinical cooperation among fragmented community caregivers. The joining of physicians in medical groups, either multispecialty clinics or IPAs, opens possibilities for informal consultation, evidence-based accountability, and a new professional culture of peer review. Affiliation with practice management firms and physician-hospital organizations broadens the scope of clinical coordination but heightens the risk of incentive attenuation and bureaucratic hypertrophy. Competition among health care organizations is conducive to ever-improving medical standards in the same way that competition among sporting teams is conducive to ever-improving athletic standards.

Health plans have adjusted to the heterogeneity of consumer demand by marketing multiple networks, methods of managing utilization, and benefit packages priced with multiple premiums, deductibles, and coinsurance provisions. Product diversification is accompanied by geographic expansion, as plans and providers reduce their dependence on any one region and leverage skills gained in one local market into competitive advantages in others. These multistate, multiproduct firms are consolidating through mergers and acquisitions, leaving most metropolitan markets dominated by a small number of large organizations. But entry barriers are lower, not higher, than in the era of professional dominance, rewarding competition and undermining cartels. Vertical disintegration is the norm, permitting health plans, medical groups, and hospital systems to focus on those services they perform best while coordinating with other services through contractual relationships. Innovation in organizational structures is accompanied by innovation in contractual structures, as plans and providers experiment with new methods of payment, medical management, and quality measurement.

The corporate system of health care has produced ever stronger organizations and ever more intense performance competition among them. But its sustainability as an economic system has not thereby been assured. The very dynamism of the corporate system disrupts established social norms and disadvantages powerful political constituencies. American health care will never go back to professional dominance, which lost its political power as well as its organizational basis in the transition to managed care. It will not proceed to the complete consolidation, the full

vertical and horizontal integration embodied in the principles of managed competition. But corporate health care is threatened by a new form of regulation. This will not be the entry barriers and rate setting of the utility commission, but will come through myriad small rules, requirements, and judicial precedents designed to protect the purportedly helpless consumer against the hazards of choice and competition. Individually, each new regulation will limit only modestly the discretion of health care purchasers and providers. Cumulatively, however, they could strap down the corporate Gulliver through a thousand small impediments on innovation, taxes on efficiency, and litigious disputes over clinical uncertainties.

Despite the serious challenges facing the emerging health care system, it is possible to conclude on a cautiously optimistic note.<sup>12</sup> Political backlash followed the growth of large diversified firms in the American economy but did not reverse its course due to the remarkable gains in efficiency and quality generated by market competition and corporate organization. Capacity investment, market entry, product price, and service specifications have been opened to competition in the transportation, communication, energy, and finance industries after decades of utility regulation. The competitive corporate system has been sustained because it proposes not incremental improvements in cost or quality for the preexisting set of goods and services but, rather, revolutionary changes in the basic organizational and market structures of the economy. Similarly, the corporate system does not offer incremental reforms to the framework of professional dominance in medicine but has swept it away completely, along with fragmented physician practice, arms-length indemnity insurance, and cost-unconscious consumer demand. In the final analysis it is not incremental improvement in price and quality that counts, but rather the radical competition from the entirely new product and service, the new technology, the new source of supply, and the new type of organization, competition that strikes not at the margins of the profits and the outputs of the existing organizations but at their foundations and their very lives. This is the corporate practice of medicine.

20. There is a substantial economic literature on market structure and performance, and in particular on the Schumpeterian hypothesis that concentrated market power is conducive to technological innovation due to ability to internally finance projects with uncertain and long-term profitability. For an overview of related issues, see W. M. Cohen, "Empirical Studies of Innovation and Market Structure," in *Handbook of Industrial Organization*. Also see G. Dosi, "Sources, Procedures, and Microeconomic Effects of Innovation," *Journal of Economic Literature* 26 (1988): 1120-1171.

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## CHAPTER 9. THE CORPORATE PRACTICE OF MEDICINE

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# Index

- Actna U.S. HealthCare, 74, 76, 98, 97, 166, 169
- AHJ physician practice management firm, 159–160
- Airline industry, 30, 32, 215, 225, 226; deregulation, 217, 218, 219, 254n10
- American Group Practice Association (AGPA), 95
- American Medical Association, 28, 33
- American Medical Group Association, 95
- Antitrust law: medical practice and, 17–18, 28, 233, 251n18
- Arizona Medicaid, 42
- Banking industry, 215, 217, 219–220, 225–226
- Bayshores medical group, 94, 120
- Beaver medical group, 93, 95, 207
- Blue Cross: staff-model HMOs, 82–83
- Blue Cross Blue Shield: as stimulus for commercial health insurance, 21–22
- Blue Cross Blue Shield of North Carolina: Nalle Clinic and, 97
- Blue Cross of Northern California: Take-Care HMO, 77, 248n7
- Blue Shield of California, 208
- Bristol Park Medical Group, 93, 183, 186–187; affiliation with St. Jude Heritage Health Foundation, 184, 186; as PHO, 104; physician culture, 186
- Brown and Toland Medical Group, 135, 137–138, 148; physician compensation by, 140–141
- Buenaventura medical group, 93, 95, 207
- Buyers Health Care Action Group, 43, 49, 51, 247n27
- California: capitation in, 103, 105; Catholic Healthcare West hospital system, 136–137; HMO market share in, 94–95; hospital admissions in, 109–110; multispecialty medical groups in, 93, 135; network medical groups in, 135–138; quality assurance monitoring in, 114, 117
- California Cooperative Healthcare Reporting Initiative, 117
- California Public Employees Retirement System, 43
- California Pacific IPA, 137
- California Pacific Medical Center, 137–138
- California Primary Physicians, 94
- Canada: fee schedules, 29; medical cost control in, 5, 33, 241n48; medical economy compared to U.S., 33; specialty referrals, 106, 145
- Capitation payment, 99–100; benefits, 99, 102–103; breadth of, 101–102; in California, 103, 105; departmental capitation, 142, 145; disadvantages, 99; fee-for-service vs, 100–101, 114,