for quartz. Nearly 30% of the samples exceeded the permissible exposure limit for silica, and over 10% exceeded twice the limit.[3]

Control. Hazardous exposures occur in constantly changing work environments such as construction and mining. OSHA enforcement of dust exposure limits in construction and general industry depends on the measurement of dust levels and the results of quartz content analysis, a process that can take from days to weeks. There has been no enforcement of good work practices for silicosis prevention in construction or general industry. In contrast, MSHA recently took the critically important step of adopting enforceable rules requiring effective dust controls to be in place during surface mine drilling.[9]

Tragically, the United States, unlike most industrially advanced countries, permits virtually unrestricted use of sand for abrasive blasting, except in the underground mine environment. In contrast, the United Kingdom adopted Blasting Regulations severely restricting the use of abrasives containing free silica in 1949.[10] In 1974, the National Institute for Occupational Safety and Health recommended that the use of sand in abrasive blasting be eliminated in the US.[11] In 1992, because of continuing observation and investigation of disease and death from abrasive blasting, the Institute issued an alert reiterating this recommendation.[12]

Surveillance. There are no requirements for ongoing measurement of silica in the work environment, even in those workplaces where respirable quartz dust is known to be present. There is no mandatory health screening or surveillance of workers exposed to quartz dust.

A permissible exposure limit alone—even one more stringent than the current one based on the recent lifetime risk analyses—will not be sufficient to control the disease. A comprehensive workplace standard defining effective preventive practices would provide a framework for silicosis control and eventual elimination. But even a comprehensive standard will be ineffective without a widespread commitment to comply with its directives.

The late Irving Selikoff, adapting Rudolf Virchow's 19th century description of tuberculosis, called silicosis a social disease with medical manifestations. The scientific bases for addressing the "manifestations" are in place. Eradication awaits only the social will to act. □

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Comment: Containing State Health Care Expenditures—The Competition vs Regulation Debate

Melnick and Zwanziger's study, in this issue of the Journal, of state health care spending in California as contrasted with four rate-setting states enhances both the scope and the substance of the debate about competition "vs" regulation.[1] Their data, covering spending on physicians and drugs, as well as on hospitals over time, and their findings on patterns of competition within California add importantly to the empirical picture of what competition can accomplish and clarify options for states that find health reform back in their laps since national efforts crashed. But several questions need elaboration before one can move from their findings—that California's price-competitive regime markedly outperformed both the national average and the record of four prominent rate-setting states in containing costs from 1980 to 1991—to the conclusion that "properly structured" competition is the strategy of choice for cost-conscious states today.

Cost, Quality, and Access

As Melnick and Zwanziger point out, California's reduced flow of dollars into hospital, physician, and drug services might mean better efficiency (value for money) without compromises in quality and access, or it might reflect trade-offs on these counts. The growth of competition in California hospital markets has not only forced hospitals to reduce their margins but has also changed the nature of care. Length of stay in California hospitals has dropped so much that California's average hospital stay today is more than 4 days shorter than that of New York,[2] and the number of hospital beds has declined much more sharply in California than in the regulated states or in the nation as a whole.[3] Similarly, a study comparing Minneapolis (a highly competitive market) with Baltimore (a regulated market) found major differences in staffing patterns, outpatient use, length of stay, and more.[4] Evidently, competition not only squeezes "excess" revenues from the system faster than do regulators, but it also changes—perhaps "fundamentally"—the behavior of providers in ways whose impact on quality of care is little understood.

Editor's Note. See related article by Melnick and Zwanziger (p 1391) in this issue.

Moreover, as Melnick and Zwanziger remark, competition-induced changes in the behavior of providers raise special concerns about access to care for the uninsured and other vulnerable groups. Policymakers exclusively preoccupied with costs may be willing to let more citizens go without coverage, tolerate obstacles to timely care for the uninsured and public clients, refuse fair compensation to hospitals serving the poor, or shift tasks and fiscal burdens to county governments that are ill-prepared to shoulder them. The uninsured proportion of California's population runs about 60% higher than the population-weighted average among the regulated states. Although many uninsured get care in hospital emergency rooms, California hospitals provide relatively little uncompensated care, committing 5.5% of expenses to this purpose in 1991, below the national average of 5.9% and well below the regulated states' population-weighted average of 6.4%.[5] Regulation in the rate-setting states aims at policy objectives that competition may choose to ignore, for example, subsidizing care for high-risk insured people (as in New York), covering care for the uninsured (by means of uncompensated care pools), and leveling the fiscal playing field among better off and worse off hospitals. These may or may not be worthy objectives, and regulation may or may not pursue them efficiently, but policymakers should weigh them explicitly when pondering the relative merits of competition and regulation.

The Government's Role

A reader of Melnick and Zwanziger's succinct piece might get the impression that "competition" means "markets" and "regulation" means "government." Although the authors note the importance of "properly structured" competition, they say little about the role of the California state government in creating a policy framework for competition. The issue deserves sustained attention because, compared with most of the other states, California has been exceptionally proactive, assertive, even "autonomous" in health affairs; and these features of its health politics may be inseparable from such success as its competition has achieved.[6] In the late 1960s, California balanced relatively liberal MediCal eligibility criteria with a tight fist on provider payments—one big reason why that state spends half as much on twice as many Medicaid clients as does New York. In the early 1970s, California pushed Prepaid Health Plans, an early experiment in Medicaid managed care. When scandals erupted, the state passed regulatory legislation (the Knox-Keene Act of 1975) which, by pledging to keep health maintenance organizations clean and sober, may have facilitated the managed-care expansions of the 1980s. The 1982 legislation that authorized selective contracting was implemented by a "czar" (William Guy), who coolly exploited the hospitals' excess capacity and craving for market share by insisting on sealed bids for MediCal business and dramatically rejecting a couple of bids to show that he would force prices down. As far as we know, no other state has concentrated such power over hospital contracting in the hands of one public official. Lately, CALPERS, widely cited as a model of public purchaser clout used to drive hard bargains with health plans, has benefited from tough negotiating by its health program director, Thomas Elkins, a policy entrepreneur in the William Guy mold. And, fearful that competitors could imperil federal "disproportionate share" monies that keep some essential local community providers afloat and subsidize care for the uninsured, the state has required that a local public managed-care plan be included in the options counties offer to MediCal clients.

These examples suggest that it is misleading to equate "competition" with "weak role of government." California's political proclivity for vesting sizable rate-setting and other directive powers in the hands of public agency executives insulated from the protests and pressures of providers has been important, perhaps crucial, to launching and sustaining the market competition Melnick and Zwanziger celebrate. Maybe the problem, ironically, is that the rate-setting states lack the political will to throw around the weight of the public sector as aggressively as California does. The behavior of New York State in 1976 and 1977 is an exception that illustrates the "rule." Facing a budget crisis, state rate-setters contained hospital costs so effectively that several hospitals closed or were in danger of doing so. In the late 1970s, budget woes eased and the state returned to regulatory business as usual. Restoring cost containment to its "proper" place in the mixed bag of social values that rate-setting states elect to honor, New York adopted an all-payer system to minimize cost shifting, stabilize the hospital industry, and meet the costs of uncompensated care, as well as to promote efficiency. Rate-setting may contain costs less impressively than does competition not because it cannot do so but because the pluralistic politics in these states, which encourage compromise on payment rules that policymakers, providers, and payers all can "live with," amounts to a collective decision not to let the cost containment chips fall wherever they may. The choice—or better, mix—between competition and regulation cannot be understood apart from the political institutions that make it.

Institutional Influences

Political institutions, moreover, may be merely the tip of a structural iceberg that influences relative state capacity to embrace competition and make it work. A California-style system may not be a policy "part" interchangeable among 49 other states, but rather a risky proposition contingent on successful adaptation and implementation in different and highly particular conditions.

What is cause and what is effect in Melnick and Zwanziger's findings? California's 1982 legislation changed its Medi-Cal program and permitted selective contracting, and the state saw substantial growth in managed care, especially preferred provider organizations (PPOs), after 1984. But was California's favorable cost experience attributable to the legislation, to growth in preferred provider organizations and health maintenance organizations, to the absence of regulation, or to other factors? The data themselves do not say.

Hospital and physician costs were growing more slowly in California than in the regulated states between 1982 and 1984, before the surge in managed care took place. At the same time, in Minnesota, where managed care penetration exceeds even the level achieved in California, hospital costs grew slightly faster than in Maryland and Massachusetts from 1982 to 1991. Physician costs grew at about the same pace as in Maryland and faster than costs in New Jersey over the same period.[4] Furthermore, each of the regulatory states has a higher rate of health maintenance organization penetration than the nation as a whole (though they have fewer preferred provider organizations). Nationally, Massachusetts and

Maryland ranked fifth and sixth, respectively, in health maintenance organization penetration by 1991 (though not in preferred provider organization penetration), but these high rates do not seem to have saved the states from very rapid growth in physician and drug costs.[5]

Can California Be Replicated?

The paper also shows that the benefits of competition were concentrated in the most competitive markets. All of the states considered by Melnick and Zwanziger are much more heavily urban than the US average. In California, the most urban state in the nation, 92.6% of the population live in large urban areas,[7] where vigorous competition among hospitals is likely to be sustainable. How should policymakers in states with less concentrated hospital sectors interpret Melnick and Zwanziger's results? As Kronick et al. suggest, competition may be effective only in relatively densely populated areas of the country.[8] Did less competitive areas of California also achieve better cost control than the regulated states?

And how does one interpret the finer points of organizational history and structure? Unlike such eastern states as New York and Massachusetts, with dominant Blue Cross and Blue Shield plans, California has long had a fragmented health insurance industry that generated a lively sense of competition among payers and (arguably) fewer occasions for providers to "capture" them; nor can California's evolution be understood apart from the imposing presence of the Kaiser-Permanente plans of Northern and Southern California. These plans were (and are) intensely efficiency-conscious and competitive, remain unique in the nation in size and integration, and are still the paradigm of a successful synthesis of payer and provider. Contracts of doctors and hospitals with "health plans" have been part of California medical culture for decades. When purchasers grew restive with providers (in obvious oversupply) in the 1980s, tighter and more selective contracting contrived in Sacramento was, if not exactly an incremental change, far less radical than it would have been (or would be today) elsewhere. Likewise, the growth of managed care that selective contracting accelerated was, in California's context, more theme than variation. This is not to argue that the four regulatory-minded states examined by Melnick and Zwanziger could not come to embrace a competitive model and make it work, but such a step would require extensive political rearrangement of familiar institutional furniture.

The speculative character of such considerations highlights a general problem in health policy analysis. Data-based portraits of the health system too often are followed by prescriptive leaps of faith (make markets, not rates) without the benefit of a crucial intervening level of analysis, one that ponders whether and how institutions may explain outcomes and thus shape generalization and replication.

Regulatory and Economic Cycles

Many political science and economics studies dissect the "life cycles" of regulatory agencies (which supposedly end inevitably in the capture of regulators by the special interests they oversee), but cyclical dynamics in competitive health care markets are less discussed. Although the "capture" indictments probably understate the independence and creativity of public agencies that set hospital rates, these systems do honor bargains and protect settled expectations among multiple interests, and these accommodations, doubtless, do dull the sharper edge of efficiency that price competition promises. (Business objections to rate-setting on these grounds have had much to do with the decline of rate-setting in Washington State, Massachusetts, New Jersey, and Connecticut.) But price competition may succumb to evolutionary dynamics of its own. As Melnick and Zwanziger warn, weakly managed market forces may degenerate into unmanaged oligopoly, as a handful of integrated service networks survive Darwinian market selection and carve up areas, thwarting competition. Melnick and Zwanziger counsel eternal vigilance, but it is doubtful that many political leaders, now content to hand the managed-care industry the keys to the kingdom of health "reform," will generate the will or marshal the means to fix such problems before damage is done.

Conclusions

On balance, the best practical advice to states is to reject advice that demands a "choice between" competition and regulation. Competition cannot serve the broad public interest without a public policy framework that repairs the market failures that a laissez-faire policy "inevitably" creates. Yet, moving such a strategic synthesis from theory into practice is fiendishly difficult, as the sad fate of the Clinton administration's health reform plan shows. California has gone farther than most states in cobbling together bits and pieces of a policy framework for competition and has checked the growth of costs impressively; but the state's bigger picture—an uninsured population approaching 25%, tattered "safety net" arrangements for the vulnerable, widespread stress and intermittent budgetary trauma in institutions large and small, and a diffuse sense that many systems and subsystems are on the road to collapse—is hardly a textbook ready to be declared assigned reading across the federal system. Melnick and Zwanziger offer an artful portrait of state cost containment that deserves long and careful contemplation, but practitioners and critics of the art of health policy will not know where to hang it until an historical and political frame has been supplied and institutional light and shadows added. □

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