Abstract: This DataWatch examines the impact of hospital competition, the Medicare prospective payment system (PPS), and Medi-Cal selective contracting on the provision of uncompensated care by private hospitals in California during 1980-1989. It finds that hospitals subject to more intense competition and greater fiscal pressure from Medicare and Medi-Cal reduced their provision of uncompensated care relative to hospitals facing less pressure from these sources. We estimate that had hospitals not been subjected to increasing price competition from growth of managed care plans and financial tightening in public programs, they would have provided 36 percent more uncompensated care than was actually provided in 1989.

Hospitals historically have taken it upon themselves to fill some of the gaps in the U.S. health insurance system by treating uninsured patients and then charging more to those who can pay to offset the costs. This practice, known as cost shifting, distinguishes the hospital sector from nearly all other sectors of the economy. Some $13.4 billion in uncompensated hospital services was provided in 1990, much of it to the medically indigent. With the failure of significant health care reform, reliance on charity assumes even greater importance in protecting the poor and ensuring continued access to health care services.

The ability of providers to continue to deliver uncompensated care is being threatened by powerful trends within the health care system, trends driven by both demand- and supply-side factors. Despite efforts to expand coverage, demand for uncompensated care has continued to increase as work-force changes have left a growing number of persons uninsured in the United States. Increased price competition as a result of substantial growth in managed care enrollment in health maintenance organizations (HMOs) and preferred provider organizations (PPOs) has begun to force hospital prices down in many states. At the same time, state Medicaid programs across the country are shifting toward mandatory managed care, and federal budget deficits may well lead to further tightening of the Medicare prospec-
tive payment system (PPS).

As long as hospitals can pass on the costs of uncompensated care, funding indigent care through a combination of explicit public subsidies to government-owned hospitals and hidden cross-subsidies generated within hospitals remains a viable mechanism. However, as more and more payers seek to limit reimbursement, hospitals may find it increasingly difficult to generate surplus revenue to cover uncompensated care costs. Some hospitals are reported to have developed emergency room policies that discourage use by the uninsured, such as increasing fees (for example, cash deposits that must be paid prior to treatment) or transferring indigent patients to public hospitals or academic medical centers. There also are reports that hospitals have discontinued services that are likely to serve as portals of entry for the uninsured (such as emergency departments) or services likely to be used by the uninsured (such as inpatient psychiatric care).

In this DataWatch we estimate the effects of payment pressures on the provision of uncompensated care by private hospitals in California. The experience in California is particularly relevant for several reasons. First, price competition is a major force in the California market for hospital services as a result of the explosive growth of managed care and the widespread use of selective contracting by government and private payers. Second, California hospitals were especially affected by Medicare PPS and the adoption of national payment rates, which penalize states with high costs per admission. Third, the use of selective contracting by the state Medicaid program, Medi-Cal, has forced hospitals to compete for both Medi-Cal and insured patients. The state has held down Medi-Cal rate increases, further contributing to an environment of constrained revenue.2 As a result of these changes, California hospitals have been financially constrained for some time now. Hospitals in other parts of the country are feeling similar pressures. Thus, the experience in California can serve as a harbinger of trends that are likely to appear in other states.

Data And Methods

Sample. We used data from 1980 through 1989 to assess how private hospitals in California adjusted their levels of uncompensated care in response to increased price competition and constrained Medicare and Medi-Cal reimbursement. We limited our analysis to private, general acute care hospitals. We excluded county-owned hospitals because much of their funding is tax based, and thus they are not subject to the same financial pressures. We also excluded specialty hospitals, facilities that emphasize long-term care, and hospitals with fewer than fifty beds.

Methodology. To estimate the separate effects of Medicare, Medi-Cal,
and competition policies, we constructed a multivariate model. Hospitals were characterized by bed size, ownership, teaching status, case-mix, volume of inpatient and outpatient use, and rural versus urban location. Markets were characterized by number of poor households, rate of unemployment, number of persons eligible for Aid to Families with Dependent Children (AFDC), and the presence or absence of a public hospital within the county, which serves as an alternative provider of indigent care.

To estimate the effects of each source of fiscal constraint, we compared those hospitals under the greatest pressure with those under the least pressure (defined as the top and bottom quartile of the distribution for each of the three policy constraints). Our simulation isolates the effects of each policy separately, statistically controlling for the effects of other factors that are likely to influence the provision of uncompensated care. In estimating the independent effects of each policy, we found that a number of hospitals were subjected to pressures from two or more sources. Thus, we also conducted a simulation of joint pressure effects.

Finally, to estimate the percentage reduction in the provision of uncompensated care that resulted from the pressure from these three sources, we conducted a second simulation that allowed for changes in the demand for uncompensated care as well as for changes in hospital behavior. We then calculated how much of the reduction was attributable to each policy variable. We also calculated an ownership effect because we found that for-profit hospitals have a greater response to the policy variables than not-for-profit hospitals have.

**Key variables.** The dependent variable is the cost of uncompensated care provided by each hospital in each year. The variable is based on three individual measures: charity care, plus bad debt, minus any gifts and subsidies for indigent care. The first components are reported in the data set as charges for the care provided. We used a hospital-level, year-specific cost-to-charge ratio to estimate uncompensated care costs.

The level of competitive pressure was measured by the Herfindahl-Hirschman Index. The Medicare PPS impact was modeled as the expected financial gain or loss under diagnosis-related group (DRG) rates, given the hospital’s cost structure at the time that PPS was adopted. Medi-Cal pressure was measured as the proportion of a hospital’s days attributed to Medi-Cal patients. Each of the three program variables was interacted with time dummies to reveal changes in hospital behavior over time.

**Results**

Hospitals in California provided a total of $1.3 billion in uncompensated care in 1989, $684 million by private hospitals. Public hospitals, present in
nearly half of the state’s fifty-eight counties, provided the remaining amount. Thus, even with a relatively large public hospital sector, private hospitals in California provide a substantial amount of uncompensated care and are important sources of care for indigent patients. The $684 million represented about 4.5 percent of net patient revenue. In other words, about 4.5 percent of the payments collected by private hospitals were used to cover the costs of uncompensated care.

**Financial and competitive pressures.** By looking at the extent to which Medicare and Medi-Cal cover the costs of treating their beneficiaries, one can see that each program exerted increasing financial pressure on private hospitals in California (Exhibit 1). A ratio of 1.00 indicates that the government program covers 100 percent of its costs in private hospitals. Looking at the Medicare ratio shows that during the early years of PPS, when payment rates included adjustments for regional cost differences, hospitals recovered nearly all of their Medicare costs. However, after 1986 hospitals recovered less and less of their Medicare costs, so that by 1989 Medicare payments covered only 88.8 percent of total Medicare costs.

Medi-Cal has exerted even greater fiscal pressure on private hospitals. The downward trend in the ratio of payments to costs began even before the advent of selective contracting in 1983 and then accelerated after its implementation. Cost recovery fell from 92.6 percent in 1980 to 81.9 percent in 1982. Medi-Cal payments as a proportion of costs dropped notably during the rest of the decade. This is consistent with reports that

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<td>Medicare And Medi-Cal Payments As A Proportion Of Hospital Costs In California. 1980-1989</td>
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Source: Authors’ calculations using data from the California Office of Statewide Health Planning and Development.
the state granted few increases in Medi-Cal rates following the first hospital negotiations in 1983 and 1984 (and Medicaid disproportionate-share payments were fairly insignificant during the study period). By 1989 Medi-Cal payments covered only 57 percent of Medi-Cal expenses.

During this same time period, enrollment in managed care plans in California grew from less than 20 percent of the insured population to more than 80 percent. Because managed care plans in California rely heavily on selective contracting with hospitals, there is significant price competition among hospitals in competitive markets.

**Policy effects: competition, PPS, and Medi-Cal.** Exhibit 2 shows how hospitals responded to increasing fiscal pressure during the study period. In this exhibit we compare the provision of uncompensated care by hospitals in the bottom and upper quartiles of the distribution for competition, Medicare PPS, and Medi-Cal.

In the base period 1980-1982, before the introduction of the policy changes described earlier, hospitals located in highly competitive markets provided considerably more (20.7 percent) uncompensated care than did hospitals in the least competitive markets. By 1989 the ability of these hospitals to continue to meet the demand for uncompensated care fell relative to hospitals not facing as much competitive pressure. Hospitals in highly competitive markets still provided more uncompensated care (12.6 percent), but not as much as they did in the base period. Similarly, hospitals subject to increasing financial pressure from PPS during the 1980s were large providers of uncompensated care in the base period, providing 67.6 percent more care than those that would face no pressure under PPS (Exhibit 2). Although they continued to provide more uncompensated care, their relative level of effort also fell.

Surprisingly, hospitals with large Medi-Cal caseloads provided only 9
percent more uncompensated care in the base period than did hospitals with very few Medi-Cal patients. By 1989 hospitals with large Medi-Cal loads provided dramatically less uncompensated care.

Hospitals subjected to dual sources of fiscal pressure provided much more uncompensated care in the base period, and in two of the three cases they continued to do so in 1989. However, even in these two cases, highly pressured hospitals cut back sharply on provision of uncompensated care.

**Aggregate effect of policy constraints.** Between 1979 and 1989 a number of factors increased demand for and costs of providing uncompensated care. For example, the uninsured population in California grew from 3.5 million to 5.9 million people, an increase of 69 percent. At the same time, hospital costs increased from an average of $422 per inpatient day in 1980 to $820 in 1989 (in constant dollars). Although private hospitals provided more uncompensated care in response to the growing demand, they were unable to keep pace. In 1980 the average private hospital in California provided $1.2 million of uncompensated care. Had they been able to match the growth in demand, private hospitals would have provided an estimated $2.9 million of uncompensated care, an increase of 142 percent. Instead, the average hospital provided $2.13 million of uncompensated care in 1989. These findings indicate that had fiscal pressure from competition, Medicare PPS, and Medi-Cal contracting not intensified, private hospitals in California would have provided 36 percent more in uncompensated care than they did over the period 1980-1989. We parcel this shortfall in uncompensated care out to four components (Exhibit 3).

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**Exhibit 3**  
Contribution Of Various Factors To The Uncompensated Care Shortfall In California

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Source: Authors’ calculations based on simulations.

* Prospective payment system.
Discussion

Our results show that those hospitals at greatest risk from the financial pressures exerted by increased price competition or cuts in Medi-Cal and Medicare payment rates were significant providers of uncompensated care in the base period. As pressure from these sources increased, these hospitals reduced uncompensated services relative to hospitals that did not face such pressure. Thus, the burden of providing uncompensated care has been redistributed among hospitals, with those hospitals under the least fiscal pressure absorbing a greater share than they did in the past.

Overall, private hospitals would have provided 36 percent more uncompensated care than was actually rendered had financial incentives not changed. These findings suggest that the financial constraints placed on hospitals during the past decade in an effort to encourage greater efficiency and slow the growth of hospital costs may undermine the ability of hospitals to support charity care. As these pressures intensify and spread to other parts of the country, access to care for uninsured and indigent persons may be jeopardized unless alternative sources of financing are identified or universal coverage is established.

One mechanism designed to improve the financial status of hospitals serving indigent patients has been to supplement hospitals’ payment rates with disproportionate-share payments. This mechanism was introduced at the end of our study period by both Medicare and Medicaid. Our results suggest that this policy could play a pivotal role in continuing to ensure access to care for the uninsured, at least at those facilities that historically have treated them. However, it could also lead to greater segregation of the poor to particular facilities if other hospitals, faced with revenue constraints, reduced the amount of care they provide to indigent patients.

Another mechanism for bringing in the uninsured would be to create an uninsured pool. Sponsors of the pool could bargain with providers to cover pool members at negotiated prices. In areas in which pools have market power (for example, in places in which there are a number of competing hospitals, at least some of which are operating with excess capacity), they could extract price concessions from hospitals. As long as the offered price exceeded the marginal cost of treating these patients, hospitals would have an incentive to contract with the pool. Using this mechanism, coverage could be extended to the uninsured at less-than-average-cost prices, thus lowering the cost of universal entitlement. Experience in California and elsewhere has shown that plans with market power can extract price concessions from hospitals. If managed effectively, these marginal cost pools for the uninsured could increase access at much lower costs than would be incurred if the uninsured were folded into the current system.
In the recent reform debate, many legislators supported plans that fell short of guaranteeing universal coverage. It seems likely that many did so, not because they do not believe that all Americans should have access to care, but rather because they believe that there is no crisis in access to needed care, even for the uninsured. They base their belief, in part, on the fact that a long-standing tradition in the United States has provided essential health services to people who lack health insurance and are unable to pay. Continued fiscal pressure or reductions in disproportionate-share payments to hospitals will jeopardize this invisible safety net.

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NOTES


3. If we allowed the levels of the explanatory variables to change, we would not know whether changes in the level of uncompensated care were due to changes in competitive pressure or to changes in any of the explanatory variables, such as case-mix, teaching status, poverty level in the hospital’s market, and so forth.


6. Other explanatory variables included measures of scale (log of admissions, admissions squared, visits, and visits squared); log of case-mix index; peer group (teaching hospital, large urban, small urban, rural); bed size; ownership; and a price deflator to account for inflation. Also included were measures of alternative supply for charity care (a dummy for whether there is a public hospital in the county, and the ratio of public beds to total beds in the county as a measure of the capacity of public hospitals). The model also controlled for measures of the demand for uncompensated care. Ideally, we would want to include a measure of the number of uninsured persons in a hospital’s market area, but data on the uninsured are not available at a level that can approximate hospital market areas (ZIP code or county). Instead, as a proxy, we used the proportion of households below 150 percent of poverty (measured at the ZIP-code level and aggregated to a hospital’s market area using 1980 and 1990 census data). Data for the intervening years were interpolated. Other proxy measures included percentage of unemployed persons in the county.

7. These comparisons control for scale differences and all of the other factors included in the regression model, so size does not explain the differential in provision of uncompensated care.