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Market Reform in New Jersey and Quality of Care: A Cautionary Tale

Editor's note: As more than 40 states face present and projected deficits in their health care budgets, some legislatures are considering market-based reforms to control rising health care costs. This continues a trend begun in the 1990s that emphasized market competition over state regulation and mandates. However, little is known about the impact of many market-based reforms on quality of care. This Issue Brief evaluates the effect of one reform—the deregulation of hospital reimbursement rates in New Jersey—on one important outcome of care—mortality from acute myocardial infarction (heart attack). The findings serve as a reminder that cost-constraining reforms may reduce the quality of care, particularly for uninsured and other vulnerable populations.

State regulation of hospital rates virtually disappeared in the 1990s

In the 1970s and '80s, many states implemented regulations setting hospital reimbursement rates for private insurers and, in some cases, for all insurers. Hospital rate-setting was considered a cost-containment tool that could also spread the costs of charity care, because most rate-setting models built subsidies for uncompensated care directly into hospital rates.

- By 1980, about 30 states had some form of hospital rate-setting. Their provisions differed, especially on whether all payers (including Medicare) were subject to regulation. States with an all-payer system (requiring federal waivers for Medicare) were thought to have the greatest potential for cost savings, and the greatest ability to distribute the financial burden of charity care across payers. All-payer states included Maryland (1977), New Jersey (1978), Massachusetts (1982), and New York (1982).
- Studies indicate that rate-setting systems were effective in controlling costs per hospital admission, but ineffective in controlling health care costs overall. These systems did not control the number of hospital admissions, nor did they regulate outpatient costs. With the rise of managed care and its broader potential to contain health care costs, most states turned to market-based strategies and abandoned regulatory initiatives. By 1997, only Maryland had retained its hospital rate-setting regulation, and it remains the only state still setting hospital rates today.

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- In 1992, New Jersey replaced its rate-setting system with a deregulated system that encouraged price competition and negotiation among hospitals and payers. It also substantially reduced subsidies for hospital care for the uninsured, which had been financed through a 19% surcharge on all hospital bills. As a result, state funding for charity care decreased from \$700 million in 1992 to \$350 million in 1996.

Study evaluates the effects of market reform on heart attack mortality

To identify changes in the quality of care in New Jersey after the 1992 reforms, Volpp and colleagues studied patients hospitalized for acute myocardial infarction (AMI), a common high-mortality condition whose outcomes are affected by the process of care. To measure the effect of the change in hospital financing, the authors compared how in-hospital mortality rates changed over time in New Jersey relative to changes over time in New York.

- The study focused on how AMI outcomes and cardiac procedure rates changed from the pre-reform period (1990-1992) to the post-reform period (1994-1996). 1993 was considered a transition year before full implementation of the reforms in 1994.
- New York was chosen as a comparison state because it has a large population, it is adjacent to New Jersey, and had no major policy changes in its hospital financing system from 1990 to 1996. New York eliminated its state hospital rate-setting system in 1997.
- The authors also compared their findings with national AMI mortality data from the Nationwide Inpatient Sample of the Healthcare Cost and Utilization Project (HCUP). This analysis corroborated time trends and put the results from the two states into a national context.

Mortality rates increase among uninsured patients in New Jersey after reforms

The study included a total of 286,640 patient records from New York and New Jersey, using comparable hospital discharge data from each state. The number of admissions for AMI patients in the two states was roughly constant from year to year. About 6% of these patients were uninsured in New Jersey from 1992-1996 (varying slightly each year), while the percentage of uninsured patients in New York increased slightly from 3.6% in 1992 to 4.3%-4.7% in 1994-1996.

- Mortality rates for insured patients declined steadily throughout the study period in New York and New Jersey. The rate of decline from 1990 to 1992 was similar in New York and New Jersey. Following the introduction of the reforms in New Jersey in 1992, the mortality rates leveled off in New Jersey but continued to decline in New York. However, the difference was smaller than that considered statistically significant.
 - Among uninsured patients in New York, mortality rates decreased from 12% in 1992 to 8% in 1996. In contrast, mortality rates among uninsured patients in New Jersey increased from 7.8% in 1992 to 8.3% in 1996.
 - After adjusting for many risk factors including the patient's age, sex, and other clinical conditions, the authors conclude that, compared to New York, there was a relative increase in mortality of 41%-57% among uninsured patients in New Jersey in the post-reform period. This represents about 99 excess deaths in New Jersey.
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New Jersey rates of using cardiac procedures lag behind New York after reforms

The mechanisms by which AMI in-hospital mortality increased relative to New York are unclear, but one contributing factor may have been differences in the use of beneficial cardiac procedures, such as cardiac catheterization and mechanical revascularization (heart bypass surgery or angioplasty).

- Reflecting technological improvements over time, the use of these procedures steadily increased in both states during the study period. However, the rate of increase in New Jersey lagged significantly behind New York after 1992.
- This slowdown in New Jersey was observed for both insured and uninsured patients, but was more pronounced for uninsured patients. The catheterization rate in New Jersey for uninsured patients was 36.4% pre-reform, and it increased less than the rate in New York by 9.4 to 17.3 percentage points from the pre-reform to the post-reform period. Similarly, for uninsured patients, the mechanical revascularization rate in New Jersey was 17.3% pre-reform, and it increased less than the rate in New York by 4.0 to 14.1 percentage points in the post-reform period.
- The study could not measure other factors that might have played a role in differential AMI mortality rates, such as less frequent use of aspirin and beta blockers, lower nurse/patient ratios, and delays in diagnosis or treatment.

National data mirror trends in New York, not New Jersey

The authors investigated whether the observed differences in AMI mortality could be due to changes in New York, rather than reforms in New Jersey.

- Analysis of data from 364,273 patients in the HCUP Nationwide Inpatient Sample revealed that national trends in AMI mortality in the study period mirrored those of New York for both insured and uninsured patients.
- New York instituted a Cardiac Surgery Reporting System in 1989, in which mortality rates were publicly reported for each hospital. If this system led to improved surgical outcomes for AMI patients who had bypass surgery in New York, it might explain the differential mortality changes between the two states in the study period. However, when the authors examined mortality rates for the subset of AMI patients who had bypass surgery in each state, they found the opposite effect—that is, from 1992-1996, mortality for heart bypass patients increased 7.1% in New York, and decreased by 15.8% in New Jersey. Thus, bypass mortality rates did not improve in New York for AMI patients, and cannot explain the differences in AMI mortality rates between the two states in this study.
- The authors also ruled out other possible explanations of the results, such as changes in the characteristics of the uninsured population in each state, changes in the transfer rate between hospitals (since pretransfer hospitalizations were excluded from the study), and major changes in the length of hospital stays. Consistent with differences in cardiac procedure rates, average length of stay decreased slightly more in New Jersey than in New York in the post-reform period, which would bias against finding a relative increase in mortality in New Jersey.

POLICY IMPLICATIONS

These findings indicate that the outcomes of care for uninsured patients with AMIs in New Jersey declined following the 1992 deregulation of hospital reimbursement rates. Although the authors cannot be sure about a cause and effect relationship, these results are consistent with the hypothesis that the uninsured were particularly vulnerable in the switch to a market-based system, which cut state subsidies for their care.

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POLICY IMPLICATIONS

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- In New Jersey, the number of hospitalized uninsured patients with AMIs did not change greatly over time, suggesting that access to care was maintained for medical emergencies after reform. However, the relative decreases in cardiac procedure rates in New Jersey suggest that patients were managed differently once they were admitted in the post-reform period. This possibility warrants further study.
- Because inpatient care for the uninsured is funded primarily from hospital revenues in excess of costs, reforms that put increased pressure on hospital margins are more likely to affect the quality of care provided to the uninsured.
- As state and federal policymakers consider reforms to contain rising hospital costs—for example, changes in Medicare and Medicaid payments to providers—they need to recognize the potential impact on quality of care. Market-based reforms, in particular, should be coupled with explicit strategies for maintaining funding levels for care of the uninsured and monitoring the impact of such reforms on the quality of care for this population.

This Issue Brief is based on the following article: K.G. Volpp, S.V. Williams, J. Waldfogel, J.H. Silber, J.S. Schwartz, M.V. Pauly. Market reform in New Jersey and the effect on mortality from acute myocardial infarction. Health Services Research, April 2003, vol. 38, pp. 509-527.

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Issue Brief



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