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In This Issue

EPA's Proposed Expansion of Noncompliance Benefit Estimates

By Kent W Mikkelsen

The Environmental Protection Agency (EPA) recently proposed changing its approach to estimating the economic benefit a violator derives from noncompliance with environmental regulations. Many of EPA's proposed changes improve the flexibility and precision of the economic benefit (BEN) model EPA uses to estimate those benefits. The proposals also include a significant expansion of EPA's approach by including "illegal competitive advantage" allegedly not already estimated using its existing methodology. In fact, this term is misleading because the benefits referred to do not depend on, or necessarily affect, competition. More significantly, EPA appears to be seeking additional benefits where none are likely to exist.

EPA's BEN model estimates the private gain for civil penalty purposes by calculating the difference between the costs of complying on time and the costs of complying late. By delaying pollution control investments, a violator earns a rate of return on money it postponed investing (capital costs), and avoids altogether the operating costs that it would have incurred during the period of noncompliance. The net present value of these delayed and avoided expenditures as of the date the penalty is paid determines the economic benefit component of an EPA penalty.

EPA claims that the avoided cost approach applied in the BEN model does not capture some benefits violators may derive from noncompliance. It describes as "illegal competitive advantage" the supposed additional benefits a violator receives when delaying and avoiding compliance permits the violator to manufacture and sell products in the marketplace at lower cost.

The term "illegal competitive advantage" implies that the violator's benefits are obtained at the expense of other competing firms, when this may not be the case. Much of EPA's analysis would be equally valid (or invalid) if the violator were a monopolist facing no competition or an atomistic competitor whose actions have a negligible effect on surrounding firms. Any implication that environmental violations are certain or even likely to result in harm to competition in an antitrust sense is quite misleading.

EPA offers an illustration of the possible difference between BEN-estimated benefits and "competitive advantage" or non-cost benefits. Closely examined, this illustration does not provide any basis for benefits not captured in BEN. EPA considers an example in which all firms in the market except the violator comply with a new environmental standard by adopting pollution abatement technology. The market price for the product rises to reflect

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Economic Bases for Medicare Reimbursement Rates

By Matthew G. Mercurio

The Health Care Financing Administration (HCFA) periodically proposes revisions to Medicare reimbursement rates for various healthcare services. The importance of these rates to providers is difficult to overstate, given the size of the Medicare population and that Medicaid and private insurers often tie their reimbursements to Medicare's. Recently, HCFA proposed revisions to reimbursements for certain diagnostic medical equipment and laboratory tests. HCFA's proposals, which would have reduced reimbursements substantially, lacked solid economic analysis and would have produced inappropriately low reimbursements had they been implemented.

HCFA has historically recognized that reimbursement rates should take market forces into consideration. Indeed, various rules tie HCFA reimbursement levels to estimates of the prices that prevail in the market. Competently performed market surveys can be very useful in measuring prevailing prices. In 1998, HCFA conducted a survey of the retail prices of six items of durable medical equipment. These survey results and analysis were used as the basis for proposed adjustments to the reimbursement rates for the six products, one of which was the blood glucose strips used by diabetics to test their blood sugar level. Considerable downward adjustments in rates were proposed for blood glucose strips and several other products. The survey methodology HCFA used, however, was badly flawed. Among the shortcomings of the survey, the sample on which it was based was not representative of the population of the United States. Major metropolitan areas such as New York City and Los Angeles were not included in the sample. Further, no apparent effort was made to ensure that the number of stores sampled in each state reflected either the general population or the populations specifically using the product at issue. Adjusting the survey data to take into account population differences resulted in higher estimated prices.

Even if the survey had been sound and unbiased, and the proposed rates were an appropriate estimate for reimbursement (which was not the case), the results were not applied consistently. In the states where the survey results yielded lower prices than the current reimbursement rates, HCFA proposed rate reductions. Yet for the states in which the survey revealed higher prices than current reimbursement levels and for which prices should have been adjusted upward significantly, HCFA proposed no rate increases. The flaws in HCFA's survey analysis proved to be significant enough that the proposed changes were never implemented.

In 1999, HCFA proposed to set a definitive reimbursement rate for the Roche HIV-1 viral load test. The HIV viral load test measures how many copies of the HIV virus are in a sample of blood plasma (i.e., the "viral load"). The viral load test involves several distinct steps. When the Roche HIV viral load test was introduced in 1996, no single Medicare reimbursement code for the entire test covered all of these steps. However, there were individual codes for each of the steps that make up the full HIV viral load test. The 1996 reimbursement rates for the full test were computed by adding the individual reimbursement rates for each step of the test.

Starting in 1997, a temporary "all-inclusive" code incorporating all of the steps in the HIV viral load test was proposed, and in 1998 a new code was instituted to replace the temporary code. Insurance carriers were instructed to determine reasonable methods for computing their reimbursement rates under the new code. Apparent confusion about the details of the process by which rates were to be developed by individual carriers led to substantial reductions in rates to inappropriately low levels. At least two economically sensible alternative methodologies lead to appropriate reimbursement rates. The first, which is similar to the approach originally used in 1996, adds the same individual test components, but uses the 1999 reimbursement rates. Estimation of the rates in this manner results in an increase in 1999 reimbursement rates of more than 100 percent over then-prevailing levels.

Another reimbursement methodology is based on the Medicare claims data maintained in an electronic database by HCFA. The statutory fee schedule for clinical diagnostic laboratory tests for Medicare is 60 percent of the prevailing charges. Analysis of the Medicare reimbursement claims data for 1997-1999 reveals that 60 percent of the average billed charge for the HIV-1 viral load test was substantially higher in each year than the average Medicare reimbursement level. For example, the 60 percent of the average billed charge in the first half of 1999 was $155.42 compared to an average Medicare reimbursement of only $104.54. After initially proposing a fee cap of $73.00, HCFA ultimately established a reimbursement rate for the Roche HIV viral load test at $117.59.

If payment levels for Medicare-covered technologies are set too low, manufacturers may not provide the technology as readily, thereby limiting patients' access to them. Unless a proper payment foundation is put in place for established tests, decisions with respect to new technology will be made in an arbitrary fashion and manufacturers and, ultimately, patients may suffer.

Vice President Matthew G. Mercurio specializes in empirical analysis using large data bases, survey and panel data, and time series data. He has developed econometric and statistical models for Medicare reimbursement methodologies as well as for competitive analysis, damage estimates, and price fixing.

In-Network Diversion by Managed Care

By David A. Argue

Over the past 20 years, managed care has helped transform competition in the health care industry. Much of managed care's importance in affecting competition among providers derives from its ability to influence patients' choice of physicians and hospitals. Enhanced competition among providers has, in turn, become a central aspect of the antitrust agencies' review of healthcare mergers. Recent changes in the nature of the preferences of managed care enrollees toward more inclusive provider networks, however, appear to undermine the ability of managed care plans to influence patient choice. The government may perceive these changes as weakening managed care and thus use that as grounds for thwarting the continued consolidation among hospitals. It is far from certain that these perceived changes will ultimately alter managed care plans' ability to influence patient choice.

Managed care plans have principally influenced patients' choice of hospitals by providing enrollees with financial incentives to use the hospitals designated by the plans. One of the most common methods of directing patients to particular hospitals has been for plans to sell health insurance products with limited hospital networks. Managed care plans have created competition among hospitals, forcing them to compete on price and quality to be included in limited networks. Hospitals have been willing to offer reduced rates because the plans can deliver an increased volume of patients. Volume grows because plans pass reduced rates to enrollees in the form of lower premiums.

Recently, however, managed care plan enrollees have been demanding a greater choice of hospitals, i.e., more inclusive hospital networks. On the surface, the trend toward more inclusive networks appears to undercut managed care plans' efforts to force hospitals to compete to join limited networks. Why should a hospital offer lower rates to a managed care plan if the hospital will be included in the network regardless of its rates? And if networks are not restricted, how can managed care plans deliver increased volume to hospitals with lower rates? Without some ability to deliver increased patient volume in exchange for lower hospital rates, managed care plans may be unable to control hospital costs as effectively and would lose their competitive edge over other health insurance options.

> "It is far from certain that these perceived changes will ultimately alter managed care plans' ability to influence patient choice."

Several alternatives remain for managed care plans to influence patient choice of hospital while still offering more inclusive networks. Managed care plans typically offer more than one health insurance product. When an employer chooses a particular managed care plan to offer health insurance products to its employees, the employees may have a choice of different products with varying combinations of premiums and networks. This allows plans to offer products with different out-of-pocket expenditures (i.e., co-payments and deductibles). Plans can simply increase the out-of-pocket expenditures for more inclusive networks. Enrollees who prefer to have a more inclusive network of hospitals may then select a product with such a network, but have higher out-of-pocket expenses than enrollees who choose a product with a more restrictive network. Enrollees that do not have strong preferences for the higher-priced providers have strong incentives to enroll in the lower-cost plan with a more

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Selected EI Cases

State of California v. Sutter Health System/ Summit Medical Center

Principal Margaret E. Guerin-Calvert and Vice President Stephanie M. Mirrow provided economic and extensive empirical analyses of the merger of two Bay area hospitals, Sutter Health's Alta Bates Medical Center in Berkeley (represented by Jones, Day, Reavis & Pogue) and Summit Medical Center in Oakland (represented by Crosby, Heafey, Roach & May). Their work included assistance in the FTC review process. Guerin-Calvert testified as the economic expert at trial for the defendants when the merger was challenged by the State of California. The District Court decision denying the preliminary injunction highlights geographic market and failing firm issues as bases for the decision for the hospitals. The decision is currently on appeal.

Cleveland Thermal Energy v. Cleveland Electric Illuminating

Cleveland Thermal Energy, the operator of steam and chilled water distribution systems in Cleveland, recently obtained a settlement in its Sherman Act litigation with Cleveland Electric Illuminating. The settlement removed a restrictive contract clause opposed by Cleveland Thermal Energy. Principal Mark W. Frankena provided deposition testimony that the clause was an unreasonable restraint of trade. The case was litigated for the plaintiff by Barnes & Thornburg of Indianapolis.

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the higher marginal costs borne by the producers. The violator has a cost advantage and could (a) charge the market price and pocket the avoided costs or (b) charge a lower price than its competitors in order to gain market share. EPA believes that BEN is designed to calculate only the delayed and avoided costs of noncompliance regardless of which strategy the company pursues. EPA claims that BEN implicitly assumes that the violator follows strategy (a) and does not address the potential market impacts associated with the violator's lower marginal costs.

It is generally true that if a firm experiences a decrease in its marginal costs, it will not choose simply to enjoy the cost savings as an increase in profits on its existing output, as in option (a). Instead, the firm can increase its profits if it responds to the lower costs by increasing output, as in option (b). It might appear, then, that if option (b) results in greater profits than option (a), that the cost-based BEN estimate will not fully recover the increase in profits if (b) is chosen. This simple analysis fails to recognize that choosing option (b) not only results in increased profits but also a higher BEN estimate and subsequent penalty. In many instances, rather than understating the benefit of noncompliance to a firm choosing (b), the application of BEN over-penalizes such a firm. Overestimation results from a noncomplying firm expanding output due to lower costs. Thus, there is no need to supplement BEN with benefits from "competitive advantage."

Contrary to EPA's assertion, it is not true that the BEN model's approach yields a lower bound on total economic gain. The avoided cost-based BEN model estimate is quite adequate in many cases and can even result in an overstatement of a violator's benefits. A non-complying firm that chooses to increase its sales does not ordinarily enjoy benefits that cannot be captured by the BEN model. In violations involving an activity that would be uneconomic if the firm were in compliance, the best measure of the benefits from noncompliance may be the incremental profits from the non-compliant activity.

Vice President Kent W Mikkelsen served as a witness for the State of Virginia on environmental damages. He is coauthor with Susan E. Dudley, a Senior Research Fellow at the Mercatus Center of George Mason University, of a forthcoming paper in Environmental Claims Journal *on which this piece is based.*

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restrictive network. Conceptually, at least, this approach could be modified further. A plan may wish to use the same network for all of its products. In this circumstance, out-of-pocket expenditures could be tailored to the costs of individual hospital–higher out-of-pocket expenditures for more costly hospitals and lower ones for less costly hospitals.

If, as the antitrust agencies appear to believe, physicians are an important factor in patients' choice of hospital, risk-sharing mechanisms with physicians provide another means by which managed care plans can influence the use of hospitals. There are many variations in the structure of risk-sharing products, but the basic notion is that physicians bear some of the financial risk of the cost of patient care that would otherwise be borne entirely by the managed care plan. At the extreme are full-risk products in which the physicians are entirely responsible for higher-than-expected health care expenditures. To illustrate how these products can be used to direct patient choice, consider a product in which risk is shared between physicians and the managed care plan. Typically, such a shared-risk product would include some form of a "risk pool." A risk pool may constitute a portion of the premiums paid by the enrollees. If patients' hospital expenditures are below a certain level, the physicians may receive a portion of the money deposited in the risk pool. If expenditures are too high, physicians may have to contribute to the pool to help cover those expenses. Through this mechanism, physicians are given an incentive to admit patients to lower cost hospitals.

The ability of managed care plans to stimulate competition among hospitals remains important in the context of merger reviews. Although the antitrust agencies may be skeptical of managed care's continued effectiveness in promoting hospital competition, the courts appear to be more receptive. In several recently litigated hospital mergers, including *U.S. v. Northshore-Long Island Jewish, F.T.C. v. Tenet Healthcare and State of California v. Sutter Health*, in-network diversion by managed care has been an important element. Managed care plans have continued incentives to control health care expenditures while offering patients the choice of provider that they demand. Competition among plans for enrollees helps ensure that plans will devise products that offer enrollees desirable combinations of rates and networks.

Vice President David A. Argue has extensive experience in the health care industry. He has been involved in analyzing many hospital mergers, including FTC v. Tenet Healthcare and State of California v. Sutter Health.

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