



Health Insurance Association of America

**Comments on
American Medical Association-
Sponsored Critique
of
Charles River Associates Study on
Physician Antitrust Waivers**

Charles River Associates Inc.

April 6, 2000

Comments on American Medical Association-Sponsored Critique of Charles River Associates Study on Physician Antitrust Waivers

Executive Summary

The American Medical Association (AMA) recently released a report by Stephen Foreman of Pennsylvania State University¹ critiquing an analysis performed by Charles River Associates (CRA) of legislation that would grant physicians and other health professionals a waiver from antitrust laws and permit them to bargain collectively with health plans. The AMA-sponsored Foreman report also provides estimates of the costs and benefits of such a waiver. Both these cost estimates and the criticisms of the CRA report are based on erroneous assumptions and employ a faulty methodology. As a result, no valid conclusions can be drawn from this analysis. The attached report explains the numerous errors in the AMA-sponsored critique, the most significant of which are summarized below.

The Cost Estimates: The AMA-sponsored report's simplistic effort to estimate the effect of managed care on physician expenditures through time series analysis ignores important factors that are critical to understanding the true impact of managed care. All of these errors serve to reduce estimates of the impact of managed care on health spending. The AMA-sponsored report:

- Employs an incorrect measure of health expenditures that diminishes its measured effect;
- Ignores feedback between managed care enrollment rates and expenditure increases;
- Uses and reports data inappropriately and draws conclusions from unstable estimates;
- Bases estimates on an inappropriate model; and
- Ignores other important developments that have affected health care expenditures in the last 40 years, including Medicare, Medicaid, the cost of prescription drugs, and technology.

The Interpretation of CRA's Research: The AMA-sponsored critique of the CRA analysis exhibits a misunderstanding of the literature on the savings generated by managed care, an incorrect view of the incentives physicians face to bargain collectively, and an exaggeration of the market power and profitability of managed care organizations. The AMA-sponsored report:

- Misinterprets the CRA cost estimates;
- Overlooks independent empirical evidence supporting the CRA analysis;

¹ Stephen Foreman, *A Cost Analysis of Health Care Professional Negotiating Legislation*, March 1, 2000, released by the American Medical Association with a news release on March 15, 2000: "Campbell Bill Will Give Power to Patients with Little or No Cost to Society."

- Ignores the competitive nature and low profit margins of the health insurance industry;
- Understates likely physician participation in joint negotiation and mistakenly assumes that all physicians must participate directly in order to benefit;
- Exaggerates prosecution of joint ventures by DOJ and FTC while ignoring federal and state antitrust intervention in health plan consolidation;
- Misrepresents the views of health economists cited in the report; and
- Overestimates managed care market shares.

The Estimation of Perceived Benefits: The AMA-sponsored report's attempt to measure the perceived benefits associated with the elimination of hypothetical low payments to physicians by health plans is so poorly explained and improbable as to be useless. It:

- Lacks empirical or theoretical explanation or justification of assumptions;
- Miscalculates the welfare effect, resulting in a doubling of the reported estimate; and
- Fails to consider costs to society attributable to inappropriate utilization and to higher uninsured population resulting from higher health care costs.

Detailed explanations of the points above, combined with additional critiques, are provided in the attached CRA report entitled *Comments on American Medical Association-Sponsored Critique of Charles River Associates Study on Physician Antitrust Waivers*.

Comments on American Medical Association-Sponsored Critique of Charles River Associates Study on Physician Antitrust Waivers

The American Medical Association recently released a report by Stephen Foreman of Pennsylvania State University¹ that critiques the Charles River Associates (CRA) analysis of the cost of legislation that would grant physicians and other health professionals a waiver from the antitrust laws and permit them to bargain collectively with health plans. Charles River Associates' recently updated analysis predicts that the legislation could increase national personal health care expenditures by \$29 to \$95 billion annually, and increase private health insurance premiums by 5 to 13 percent.²

In contrast, by relying on very different assumptions and methodology, Foreman predicts that the cost of this legislation, if enacted, would total only \$71 to \$814 million. Foreman's simplistic effort to estimate the effect of managed care on physician expenditures through time series analysis ignores important factors that are critical to understanding the true impact of managed care and relies on an incomplete and misspecified model that renders his results meaningless. Moreover, Foreman's critique of the CRA analysis exhibits a misunderstanding of the literature on the savings generated by managed care, an incorrect view of the incentives for physicians to bargain collectively, and an exaggeration of the market power and profitability of managed care organizations. Finally, Foreman's attempts to measure the benefits associated with the elimination of hypothetical below cost payments to physicians by health plans is so poorly explained and improbable as to be useless.

Foreman's criticisms of Charles River Associates' estimates of the costs of enactment of this legislation reflect a fundamental misunderstanding of the data, methodological approach, and basic economic principles upon which the CRA report is based. He claims that there is little evidence to support the contention that managed care has reduced health care expenditures through a combination of provider discounts and monitoring of service utilization, despite substantial evidence to the contrary. If, in fact, this contention were correct, then legislation such as that introduced by Representative Campbell should be unnecessary. Moreover, Foreman's discussion reveals that he misinterprets CRA's model and analytic methodology and draws mistaken conclusions regarding its findings. Finally, Foreman's view of the dynamics underlying negotiations between providers and health plans is based on an incorrect interpretation of current antitrust enforcement as well as of basic economic principles.

¹ Stephen Foreman, *A Cost Analysis of Health Care Professional Negotiating Legislation*, March 1, 2000, released by the American Medical Association with a news release on March 15, 2000: "Campbell Bill Will Give Power to Patients with Little or No Cost to Society."

² Foreman's analysis appears to be based on the initial June 1999 CRA report. An updated version of this analysis, which incorporates more recent data and reflects suggestions made by others regarding the range of possible outcomes, was released on March 3, 2000. As a result, some of the figures that Foreman cites from the CRA report have been superseded.

This report discusses Foreman's analyses and responds to his criticisms.

Foreman's Estimate of Cost of Campbell Bill

Foreman presents a statistical analysis that purports to measure the "savings related to managed care." Using a time series of nearly 50 years of constructed estimates of physician expenditure and managed care penetration, Foreman concludes that, over time, the effect of managed care on physician spending has been small. However, the statistical models and methods, as well as the conclusions drawn from this analysis, are subject to substantial, serious errors that make the results meaningless. Moreover, most of his errors bias his results in a particular direction: that of finding few cost savings resulting from managed care.

Foreman's errors fall into six categories: (1) incorrect choice of expenditure variable; (2) failure to account for possible simultaneity; (3) data problems; (4) inappropriateness of the dynamic model; (5) instability of parameter estimates; and (6) failure to control for important other factors (left-out variables).

1. Incorrect choice of expenditure variable: Foreman estimates a relationship between participation in managed care and a *price-deflated* measure of expenditures on physician services. This is, of course, the wrong measure of the impact of managed care on health expenditures if one important mechanism by which managed care affects physician expenditures is through reducing prices. Use of the price-deflated measure makes it impossible for Foreman to identify any managed care savings related to provider discounts.
2. Failure to account for the direction of causation between changes in managed care penetration and physician expenditures: The conclusions that Foreman draws from his analysis depend on an assumption that the level of managed care penetration is not affected by the level of expenditures on health care, i.e. that managed care penetration is *exogenous*. But such an assumption is simply untenable. In fact, there is substantial evidence that managed care participation itself responds to the level of health care expenditures. So, when levels of health care expenditures rose quickly, the managed care sector grew. Ignoring this interaction falsely reduces estimates of the effect of managed care on health expenditures.

To illustrate this problem, suppose we looked at the relationship between the number of firemen at a fire and the amount of damage or loss due to the fire. We would find a positive relationship – but this does not mean that firemen *cause* fire damage. The problem is that the *feedback* effect that more firemen show up at large fires dominates the causal effect that more firemen at a given fire reduce the damage of that particular fire. In the health care case, managed care plans are the firemen who show up when

the fire (health care costs) is high. If we simply look at the relationship between the two, we misestimate the true causal effects by missing the feedback effect.³

3. Data problems: There are several problems with the data that Foreman presents that both affect his estimates and make it impossible to assess his approach independently: (1) as noted above, use of deflated expenditure data is inappropriate given that he is trying to establish the determinants of changes in expenditures; moreover, the methodology used to deflate his time series seems incorrect (based on the data he provides); (2) Foreman arbitrarily holds managed care penetration constant before 1976, thereby underestimating the effect of managed care since he fails to account for changes that occurred prior to that time; (3) he reports data for only 38 years and yet his model is estimated based on 48 years of data.
4. Inappropriateness of the dynamic model: The dynamic model that Foreman uses relates *changes* in deflated expenditures to the *levels* of managed care participation. This type of dynamic model is not consistent with any kind of reasonable economic model of supply and demand for health care services. In fact, this model has extreme implications for the effects of managed care participation on health care expenditures that Foreman has not included in his analysis. For example, one way to assess the response of health care expenditures to managed care participation would be to use his model to estimate the changes in health care expenditures that arise from a permanent drop in the number of managed care participants. The immediate (first year) effect of such a change is measured by the managed care coefficient in the model, but the long-term effect is much larger because managed care participation is modelled to affect the *changes* in deflated expenditures. It is straightforward to show that Foreman's model implies much larger long-run effects than the immediate impact expressed by the managed care coefficient.⁴ In his application of this model to compute cost savings associated with managed care plans, however, Foreman only considers the much smaller short-run effect of managed care on physician expenditures and completely ignores the much larger long-run cumulative effects implied by his model.
5. Instability of parameter estimates: Foreman reports estimates of his model for a period of 48 years. Since he does not provide all of his data, it is not possible to verify his results. However, when his model is estimated on the 38 years of data that are provided, a larger (in magnitude) coefficient on the managed care variable results, -.0447 rather than his -.0329, implying a more substantial managed care impact. This period (1960-1997), however, includes some years for which accurate managed care penetration rates are unavailable.⁵ When his model is estimated for a more recent

³ In fact, Foreman's data provide statistical evidence that feedback is important. One statistical method that has been developed to test whether a variable is exogenous is the *Granger causality test*. Application of this test to Foreman's data indicates that physician expenditures *Granger cause* managed care participation as well as the reverse. This shows that the kind of feedback discussed above is important. Foreman notes this issue, but does nothing to account for it in his analysis.

⁴ Foreman also assumes that the relationship between managed care penetration and physician expenditures is linear but presents no economic model to support this approach.

⁵ Foreman's managed care data series is identical for all years shown through 1976.

period for which Foreman provides actual managed care penetration levels, 1976-1996, the coefficient on managed care is larger yet in magnitude: -.0559. This is nearly 70 percent larger than the result reported by Foreman. Furthermore, when the model is estimated on total professional expenditures (including the physicians, dentists, and other health care professionals covered by the legislation), the coefficient rises further to -.0643, implying that managed care reduced total professional services expenditures by nearly twice the amount that Foreman claims his model estimates even without correcting for inappropriate deflation. This kind of sensitivity to sample period and variable measured calls for more attention to the important institutional changes that have occurred in this market and how they dictate choice of sample periods.

6. Omitted variables: Foreman uses a model that attempts to explain health care expenditures using only one explanatory variable – aggregate managed care participation. In fact, there are many other factors that affect both supply of, and demand for, health care services. Many, if not most, of these other factors are potentially correlated with managed care participation – especially since this variable is, itself, endogenous to the market for health care services. As one example, Foreman’s analysis completely ignores the impact of the establishment of the Medicare and Medicaid programs on physician expenditures. As another example, pharmaceutical costs have been cited as a major contributor to recent increases in health care expenditures and also contribute substantially to higher enrollment in managed care plans by Medicare beneficiaries. Most of the factors that Foreman ignores have increased spending on physician services. Had he accounted for their effects in his analysis, the measured impact of managed care in *reducing* physician expenditures would have been more obvious.⁶

Foreman claims to provide “a more reasoned approach to estimating the cost of the Campbell bill.” However, as discussed above, the whole basis for his estimate depends on data that are inappropriate and insufficient for the task, which he applies to an incomplete model. Given that all of the errors that he makes tend to reduce incorrectly his estimate of the impact of managed care, it is not surprising that his conclusions are radically different than those derived in the CRA analysis.

CRA Cost Analysis

Foreman’s report provides a variety of criticisms concerning the assumptions made and data used by CRA to determine that the Quality Health-Care Coalition Act of 1999 or similar legislation could result in annual increases in health care expenditures ranging from \$29 to \$95 billion. His criticisms follow the structure of the CRA model, focusing

⁶ Foreman implicitly claims that potential left-out variables do not bias the estimated effect of managed care participation on health expenditures by arguing that the residuals are white noise. However, in small samples such as this, the time series identification procedure and estimation strategy are designed to produce residuals that appear to be white noise. Thus, the tests used by Foreman are not a reliable indicator of the appropriateness of this model.

separately on price and utilization effects. We discuss and comment on each of his criticisms below.

Impact of Managed Care on Provider Prices

Foreman criticizes CRA for relying on the literature review contained in a recent Barents report⁷ but, himself, misunderstands the Barents report and how it was used in the CRA analysis. Chapter Three of the Barents Group report reviews more than 20 studies of managed care savings for all types of health care expenditures. This synopsis concludes that discounts across different plan types range from 6 to 15 percent. In addition, as the CRA report notes, the economic literature on the general effects of collective bargaining and unions suggests wage differentials of 20 to 30 percent.

The CRA report posits six scenarios that reflect the likely range of impacts of physician antitrust waiver legislation. The price discounts underlying the scenarios range from 6 to 25 percent, although both the report and all associated press releases focus on scenarios two through five, for which price discounts range from 10 to 20 percent. The CRA range is based on both the fairly comprehensive Barents summary of the literature on managed care and on the more general economic literature on collective bargaining.⁸

Moreover, other examples within the health care industry support the upper end of the range of discounts used by CRA. A study by Milliman and Robertson used a 28 percent average HMO discount.⁹ Hoechst Marion Roussel reports that PPO discounts of physician charges averaged 20-21 percent.¹⁰ The recent Congressional Budget Office (CBO) cost estimate for H.R. 1304 assumes a 15 percent average discount.¹¹ A review of recent AMA news reports provides further evidence that discounts to managed care plans are significant. In early 1999, the Department of Justice obtained a rare consent agreement from a group of Florida surgeons who had jointly negotiated with managed care organizations.¹² According to an AMA press report on the collective bargaining activities, "the surgeons got 30% more than initially offered."¹³ Another recent AMA news story focused on the benefits of billing patients directly and provides an example of

⁷ Barents Group L.L.C., *Impacts of Four Legislative Provisions on Managed Care Consumers: 1999-2003*. Report prepared for the American Association of Health Plans, April 22, 1998.

⁸ Foreman mistakenly assumes that the 13 percent figure used in one of CRA's scenarios was derived from the "All HMO" figure shown in Figure 2.1 of the Barents report rather than just a logical progression in a range of discounts between 6 and 25 percent. He also criticizes CRA for not taking an average of the 6 and 13 percent figures cited in the same Barents chart; in fact, the updated CRA report (released prior to the issuance of Foreman's critique) includes a 10 percent discount scenario.

⁹ Milliman & Robertson, *Actuarial Analysis of the Patient Access to Responsible Care Act*, November 7, 1999, cited in D Emmons and G Wozniak, *Economic Impacts of Managed Care Reform*, American Medical Association, 1999.

¹⁰ Hoechst Marion Roussel, Inc. *HMO-PPO Digest 1995*.

¹¹ Congressional Budget Office, *Cost Estimate for H.R. 1304, Quality Health-Care Coalition Act of 1999*. March 15, 2000.

¹² Department of Justice, "Florida Physicians Agree to Stop Illegal Joint Negotiations in Response to Justice Department Lawsuit." News release of January 26, 1999.

¹³ Sarah Klein, "Justice Department Slaps Florida Physicians with Antitrust Charges," *American Medical News*, February 15, 1999.

a physician's \$79 charge reduced to \$43 under his HMO contract, an implied discount of 45 percent.¹⁴ Therefore, there appears to be ample support for the range of price discounts underlying the CRA estimation.

More generally, Foreman appears to ignore CRA's deliberate presentation of a fairly broad range of possible effects, for discounts as well as the other factors that affect managed care spending with and without collective negotiations by health care providers. The range is necessarily broad, precisely because the empirical evidence does not recommend a single point estimate of the value of each relevant parameter. However, the range is sufficiently broad to ensure that it contains the true likely impact.

Foreman appears to conclude that the Barents report in fact relies only on a single study that compared Aetna's managed care and indemnity plans in 1992, long before Aetna became a significant force in managed care through its acquisitions of US Healthcare, NYLCare, and Prudential. Therefore, while his assertion that Barents relied solely on this study is erroneous, the related inference made by both Foreman and the American Medical Association that Aetna's 1992 experience is unrepresentative because "Aetna is a large national plan with a reputation for achieving aggressive discounts"¹⁵ is also incorrect.

Foreman also criticizes the CRA analysis for assuming that all "discounts have been passed on to employers and consumers in the form of premium and charge savings." He maintains, instead, that managed care firms have "retain[ed] the advantages of deep provider discounts by increasing their profit structures." (Foreman, page 4.) This statement seems, on the one hand, to acknowledge that discounts have been large, and on the other to conclude, based on the experience of a single Blue Cross plan, that managed care profits have been sizeable. To the contrary, as the more systematic evidence cited in the original CRA report (see pages 16-17 of CRA report) suggests, HMOs as a group have been unprofitable. More recent reports indicate managed care profit margins "have slimmed to a skimpy 1% to 3%" as they are faced with "cutthroat competition."¹⁶

In noting that "not all provider discounts have been passed through by health plans," Foreman also appears to misunderstand the basic economics of how competitive firms operate when faced with a variety of different cost changes. If a competitive firm faces cost increases in certain items (such as quality enhancing pharmaceuticals), it clearly must take these into account in setting its own prices just as much as any cost savings that it achieves. In fact, the market forces competing firms to pass on (in the prices that these firms charge their customers) the net effect of cost increases and decreases. Therefore, to the extent that savings that managed care companies achieve by negotiating competitive discounts are offset by cost increases in other areas, the observed effect on managed care premiums must reflect the net effect of these savings and cost increases.

¹⁴ Tyler Chin, "Making Managed Care Simple," *American Medical News*, November 15, 1999.

¹⁵ American Medical Association, *Summary: Foreman Cost Analysis of H.R. 1304*, March 9, 2000.

¹⁶ Laura Benko, "New Leaders Drive Managed Care," *Modern Healthcare*, March 13, 2000, page 28.

Foreman suggests that the CRA study “assumes a static world.” In fact, the study notes (footnote 21) that while it does not explicitly estimate the dynamic effect of increased prices for health insurance, the effect on aggregate health expenditures is likely to cause some individuals to become uninsured. These individuals are then likely to “join public assistance programs and/or seek high cost health care services through the emergency room.” In either case, a larger portion of the cost burden will fall on the public sector.

Finally, Foreman criticizes CRA’s estimation of the spillover price effect (to indemnity plans). While he cites the Barents report as justification for not considering a spillover effect, he fails to note that Barents devotes three pages of its report to a review of the literature on indirect or spillover effects and deems its omission to be “the conservative approach” and “note[s] that these spillover effects would lower overall costs to the health care sector.” (Barents, page 14.) Indeed CRA includes only a minor price spillover effect, which in the updated report ranges from \$400 million to \$2.1 billion, or about 5 percent of the direct price effect.¹⁷

Impact of Managed Care on Utilization

As with his critique of CRA’s discount scenarios, Foreman asserts that the “Barents Report findings are not based on a systematic empirical study of savings...” and that the CRA study makes “uncritical use” of its results. Neither of these allegations is true. First, as noted earlier, the Barents summary is based on a thorough review of more than 20 studies. Second, the range underlying CRA’s scenarios is much lower than that suggested in the Barents summary. The latter shows utilization savings ranging from 8 to 22 percent, which, when combined with the finding that 60 to 90 percent of these savings would be lost, result in implied cost increases due to utilization that range from 5 to 20 percent. The CRA study, on the other hand, limits the utilization effect to 3 to 9.7 percent across scenarios one through six, and to 3 to 8 percent in the scenarios two through five that are discussed in the text.

Foreman also criticizes Barents’ use of an expert panel to determine the proportion of utilization savings that would likely be lost following enactment of legislation that allowed providers greater control over utilization decisions. However, he makes no alternative suggestion about a more reliable data source and ignores the range of reputable institutions that frequently rely on consensus expert panels, including the National Institutes of Health, Health Care Financing Administration, and American Medical Association.¹⁸

¹⁷ Foreman’s comments also make clear that he has not carefully read the CRA report. He wonders how the bottom of the reported range of spillover price effects is a positive number when the spillover parameters in the table range from 0 to 10 percent. As noted clearly in the report, the cited dollar impact estimates eliminate the bottom and top scenarios, so that the spillover percentages underlying the reported range are 5 and 10 percent.

¹⁸ The AMA, for example, relies on expert panels in its relative value schedule (RVS) updating process and in its CPT coding procedures. See <http://www.ama-assn.org/med-sci/cpt/update.htm>.

Foreman also suggests that the utilization effect will fall differently on Medicare and Medicaid managed care plans than on those paid for by the private sector, but he provides no support for this hypothesis. In fact, since many of the publicly financed managed care plans are administered by the same plans that operate the private sector entities, it seems more reasonable to assume that the incentives will be the same.¹⁹

The critique also notes that CRA assumes that average utilization reductions apply to all professional services. Once again, as noted above, Foreman ignores the broad range of utilization scenarios that the CRA study considers: while it is true that no single point estimate may accurately reflect each parameter that is measured, the range contains all reasonable values. Moreover, CRA posits that the utilization effect will apply to all personal health care services, given physician and other health professionals' important role in determining the health care services that patients consume. Certainly, complaints by the medical community concerning the denial of payment for services such as diagnostic procedures, hospital days, and new pharmaceutical products imply that physicians are not only concerned about their own services.

Foreman ends his discussion on utilization with a reference to United's highly publicized announcement that it no longer intends to "use its utilization review controls." He suggests that this decision implies that utilization review is not cost effective. In fact, United has only eliminated its prior authorization process. It has packaged all of its utilization review activities into an initiative named "Care Coordination" and is continuing to monitor physician decisions, identify unusual treatment patterns, provide treatment guidelines to physicians and care protocols to patients with chronic conditions, and generally ensure that costs are controlled.²⁰

Double Counting

Foreman alleges that the CRA addition of separate discount and utilization effects involves double counting because of potential interactions between price and quantity. While it is true that providers' costs may decline somewhat if they don't need to comply with utilization review activities, their concomitant ability to avoid competing on the fees they charge is likely to far exceed (and offset) the effect of reduced costs on those fees. The CRA model, in fact, takes this possibility into account by assuming that only a portion of the existing discounts will be lost. Moreover, Foreman suggests that the higher fees will increase access to care. It is a basic economic principle, in any industry under most normal conditions, that more is supplied at higher prices. However, that principle assumes that the customers pay for these additional services.

¹⁹ Baker (1997) shows that, beyond low levels, increases in Medicare and total HMO shares are associated with reduction in Medicare fee-for-service expenditures. L. Baker, "The Effect of HMOs on Fee-for-Service Health Care Expenditures: Evidence from Medicare," *Journal of Health Economics* 16 (1997): 453 – 481.

²⁰ United Healthcare, "United Healthcare Introduces Care Coordination." Press release of Nov. 9, 1999. Milt Freudenheim, "Big HMO to Give Decisions on Care Back to Doctors," *New York Times*, November 9, 1999.

In Foreman's example of the underinsured and uninsured, this cannot be assumed to be the case. Foreman appears to be claiming that if fees for physician services rise, the uninsured will obtain more services. In fact, evidence suggests that the opposite would occur. One recent study found that the more rapid growth in per capita health care spending than in income from 1980 through 1995 accounts almost entirely for the decline in coverage among workers over that same period.²¹ This finding is not unique,²² and the adverse impact of high costs is not limited to employer-sponsored coverage.²³ When asked, almost seven out of ten (68 percent) uninsured workers who are eligible for employer-sponsored coverage but decline it cite high cost as the reason.²⁴ Results are similar for the general uninsured population.²⁵

In this context, the cost savings achievable through the use of managed care take on particular significance. Had managed care not curtailed the growth of health care costs over the period from 1990 through 1996, studies estimate that there would have been between 3.1 and 5.0 million additional uninsured Americans at the end of the period.²⁶ The consequences to individuals of lacking health coverage can be dire, including delayed care, unmet needs, avoidable hospitalizations, and increased mortality.²⁷

The Extent of Professionals' Participation in Negotiating Units

Foreman argues that only a minority of physicians is actually likely to join legal collective bargaining units despite the obvious financial gains. While it is true that a minority of eligible private and government workers in other fields have joined unions, the proposed legislation does not sponsor unions, which are accompanied by substantial oversight by the National Labor Relations Board. Rather it would encourage the development of informal groups solely for the purpose of negotiating with managed care organizations. Furthermore, given the active role that the American Medical Association and various state medical associations have played in furthering both the federal and various state bills, it seems likely that they would facilitate their members benefiting from the legislation should it be enacted. Therefore, it seems more reasonable to assume that the majority of physicians would participate.

²¹ Richard Kronick and Todd Gilmer, "Explaining the Decline in Health Insurance Coverage, 1979-1995," *Health Affairs* 19, Number 2, March/April 1999, page 45.

²² U.S. General Accounting Office, *Private Health Insurance: Continued Erosion of Coverage Linked to Cost Pressures*, GAO/HEHS-97-122, July 1997.

²³ U.S. General Accounting Office, *Private Health Insurance: Millions Relying on Individual Market Face Cost and Coverage Trade-Offs*, GAO/HEHS-97-8, November 1996.

²⁴ Kenneth Thorpe and Curtis Florence, "Why are Workers Uninsured? Employer-Sponsored Health Insurance in 1997," *Health Affairs* 19, Number 2, March/April 1999, page 213.

²⁵ Karen Donelan et al., "Whatever Happened to the Health Insurance Crisis in the United States? Voices from a National Survey," *Journal of the American Medical Association* 276, Number 16, October 23/30, 1996, p. 1348.

²⁶ John Sheils and Randall Haught, *Managed Care Savings for Employers and Households: Impact on the Uninsured*, The Lewin Group, June 18, 1997.

²⁷ American College of Physicians - American Society of Internal Medicine, *No Health Insurance? It's Enough to Make You Sick*, November 1999.

Foreman also assumes that only non-employed physicians (who are not eligible to unionize) would join collective bargaining units. This assumption seems misguided. First, legislative and judicial history has left ambiguous which employed physicians are eligible to unionize.²⁸ Second, since the proposed legislation would result in a mechanism that would produce all of the benefits of unionization with few or none of the costs, it seems more reasonable to assume that physicians would favor this approach, rather than a formal union.

Perhaps most important, the benefits from collective negotiation are not necessarily limited to those health professionals who actively participate in such bargaining activities. Rather, even non-participating physicians should be able to “free ride” on the heightened fee schedules and relaxed utilization review activities that have been negotiated by other physicians. It is not realistic to assume, as does Foreman, that some physicians will allow others to enjoy substantially higher fees, with little to no associated costs, without demanding similar increases.

Savings “Give Backs”

Foreman argues that managed care organizations are unlikely, even when faced with large groups of legally organized physicians, to “give back” the savings they have previously achieved through negotiation of provider discounts. Instead, Foreman claims, health plans will be mindful of the stock market’s likely reaction to the reduction in their bottom lines that would result from increased provider payments. Such reasoning leads to inevitable speculation about why publicly traded firms don’t always undertake actions to ensure that their stock prices remain high if it is within their power to do so. Why, for example, did Aetna “allow” its stock price to fall from a high of \$99.87 last May to \$38.50 in February of this year, a drop of more than 60 percent?

Obviously, most firms must compete in markets that frequently force them to take actions that lower the profits that they would otherwise enjoy if not disciplined by competition. The generally poor economic performance of many health plans in recent years suggests that they are in fact competing fiercely for employer contracts by offering generous benefit packages at reasonable rates.

As we discuss below, Foreman’s enumeration of HMO concentration levels in local market areas is not enlightening when considering the true competitive conditions faced by managed care companies. It is hard to imagine how, in the face of a legally unified group of providers at the negotiating table, competing health plans will be able to retain their current discounts and controls over utilization. Rather, it seems more likely that, after losing the ability to contract selectively, plans will be forced to accept higher fee schedules for providers and more generous service coverage. Negotiations between plans and professionals do not involve “give backs” in either direction, but rather reflect the competitive dynamics of each particular market in question. Granting independent

²⁸ Elizabeth Thompson, “Organized Doctors,” *Modern Healthcare*, February 29, 2000, p. 35.

professionals the legal right to negotiate collectively will clearly grant them the power to obtain more generous terms.

Foreman's Conclusions Regarding CRA Cost Estimates

Foreman's conclusions regarding the CRA methodology and results are themselves misleading and erroneous for all of the reasons discussed above. In addition, his concluding section (pp. 10-11) reflects a basic misunderstanding of the figures presented. He notes, for example, that a ratio of managed care to indemnity costs of .939 implies that managed care has saved only about 6 percent.²⁹ Such a conclusion ignores benefit plan differences that are not held constant in a simple comparison of average premiums.

He then goes on to claim that the CRA study suggests cost savings of 21 to 47 percent. Foreman's derivation of this range doesn't become apparent until several pages later in his report in Table 6 (on page 17). The calculation shown on this table, however, uses the wrong parameters as well as the wrong denominator. For example, he lists managed care losing provider fee discounts of 6 to 25 percent, while, in fact, the true range used in the CRA analysis is either 3 to 25 percent (using all six scenarios) or 6 to 17 percent (limiting the analysis to the scenarios 2 through 5 that form the basis for the CRA report's conclusions). Moreover, Foreman's calculations of percentage impacts on overall expenditure levels appear only to consider physician or, at best, all health professional expenditures as the relevant denominator. Such an approach is mistaken and leads to inflated estimates, however, since, in fact, as discussed above and in the CRA report, the effect of the legislation on utilization will cover all personal health care services. When the appropriate denominator (the one that matches the basis for the expenditure effects that comprise the numerator) of all personal health care expenditures is considered, much smaller percentage impacts than those shown by Foreman result.³⁰ In fact, as the CRA report clearly states, the impact of the legislation is likely to range between 2.5 and 8.3 percent of aggregate personal health care expenditures.³¹ While such an impact is certainly substantial, it does not approach the levels that Foreman calculates, based on his misunderstanding of the CRA methodology.

Current Antitrust Law Enforcement

Foreman complains that CRA provides little support for its contention that the antitrust laws are currently being enforced at the level that maximizes consumer welfare and that no data exist to support the contention that physician network joint ventures are rarely prosecuted even if they are reviewed. Foreman also complains that the FTC and DOJ "do in fact investigate and prosecute physician joint ventures" without citing a single example

²⁹ The March 3, 2000, report notes that the ratio of managed care premiums to indemnity premiums is .932.

³⁰ Foreman also uses an incorrect proportion of expenditure dollars affected by utilization spillover effects (80 percent instead of 20 percent).

³¹ The CRA report does not, as Foreman implies, estimate aggregate managed care savings, but rather focuses on the portion that would be lost if health professionals were allowed to negotiate jointly.

of such prosecution. In fact, such prosecutions have been extremely rare as documented in the CRA report, occurring only when substantial evidence existed that the joint venture arrangements were “cartel devices aimed solely or primarily at increasing prices and that held out very little prospect of efficiency benefit.” (CRA Report, page 11.)³²

The agencies provide substantial information about the large variety of joint ventures that they deem do not violate the antitrust laws. Foreman ignores the extensive websites maintained by the Department of Justice (DOJ) and Federal Trade Commission (FTC), both of which contain areas devoted to health antitrust activities. Together the FTC and DOJ have issued 99 advisory opinions and business review letters on health care matters since their Health Policy Statements³³ were initially published in 1993. Of these 99 opinions, only seven rejected the proposed physician joint venture. The full text of these opinions is available on the agencies’ websites.

Foreman asserts that “neither the FTC nor the DOJ has brought an action to challenge misuse of any managed care firm’s market power.” This claim is clearly false given the recent, well-publicized action taken by the DOJ and Texas attorney general to modify Aetna’s acquisition of Prudential in part to address concerns regarding physician reimbursement. Moverover, since the antitrust agencies have no self-interest in appearing to favor one segment of an industry over another, the most reasonable explanation for the observed lack of challenges is that no violations of market power have in fact occurred.

Foreman also misleadingly cites the articles of three health economists (Gaynor, Haas-Wilson, and Pauly) to express concern “about growing concentration in managed care markets.” In fact, as the following quotations, drawn directly from the articles in question, note, the authors recognize that there is little empirical evidence to date to suggest that any anticompetitive behavior has occurred and that antitrust enforcement of all segments of health care markets is appropriate:

- Gaynor and Haas-Wilson (1999):³⁴ “It seems clear that the growth of managed care has led to increased price competition in health care markets.”
- Haas-Wilson and Gaynor (1998):³⁵ “The enforcement of our antitrust laws promotes healthy competition, which provides strong incentives for hospitals, physicians, and insurers to contain costs, keep fees in line, and provide appropriate care.”

³² A recent example of FTC prosecution involved its complaint against the Puerto Rican Dental Association’s efforts to fix the terms of dentists’ contracts with managed care plans and to prohibit certain forms of truthful advertising. FTC, file number 971-0038, complaint and consent issued 3/21/00.

³³ U.S. Department of Justice and Federal Trade Commission, Statements of Antitrust Enforcement Policy in Health Care. Updated 8/28/96; available on FTC and DOJ websites.

³⁴ M. Gaynor and D. Haas-Wilson, “Change, Consolidation and Competition in Health Care Markets.” *Journal of Economic Perspectives* 13 (Winter 1999): 141-164.

³⁵ D. Haas-Wilson and M. Gaynor, “Increasing Consolidation in Healthcare Markets: What are the Antitrust Policy Implications?” *Health Services Research* 33 (December 1998: Part II): 1403-1420.

- Pauly (1998):³⁶ “Because this article is primarily an exercise in normative theory, it does not emphasize actual data to any great extent.... This article is best viewed as a warning of inefficiency consequences that *could* follow from health plan buyer market power.... I am definitely not contending that there is at present conclusive evidence for such inefficiency....”

Foreman relies on a purely structural analysis of increasing concentration in health care markets to posit that competition has waned. This line of argument is inappropriate for at least two reasons. First, as the Horizontal Merger Guidelines released jointly by the FTC and DOJ indicate, “market share and concentration data provide only the starting point for analyzing the competitive impact of a merger. Before determining whether to challenge a merger, the Agency also will assess the other market factors that pertain to competitive effects, as well as entry, efficiencies and failure.”³⁷ In other words, it is not possible to conclude solely from the level of concentration in a market whether market power exists; rather it is necessary to consider the competitive dynamics of the market in question. In managed care markets, reliance on current market shares and concentration is particularly misleading, since unlike manufacturing firms that, at least in the short run, face fixed capacity constraints, in most market situations, competitive managed care firms can easily expand their enrollments.

Moreover, Foreman’s measurement of market concentration in “managed care markets” is misleading, since he relies on Interstudy data that reflect only enrollment in HMOs and HMO-based POS products, excluding all products written on a PPO or indemnity license. Given that HMO membership constitutes the minority of total insured or managed care enrollments, share calculations based on these data are likely to be misleading.³⁸ In fact, when data representing all managed plan types are considered, concentration levels tend to fall considerably.

Foreman defines “highly concentrated” markets as those Metropolitan Statistical Areas (MSAs) in which a single HMO covers at least one-third of the HMO lives. In general, shares are lower when all managed care enrollments are considered as Foreman, himself, suggests they should in earlier tables in which he lists all enrollments (across products) of the “large national managed care firms” (Tables 1-3). For example,

- In Houston, the “dominant” HMO is NYLCare with a share of 38.4 percent. Its share declines to 10.4 percent using a broader market definition that includes PPO lives.³⁹
- In Minneapolis/St. Paul, the “dominant” HMOs are Health Partners and Medica Health Plans with shares of 43.1 percent and 44.3 percent respectively. The shares

³⁶ M. Pauly, “Managed Care, Market Power, and Monopsony.” *Health Services Research* 33 (December 1998: Part II): 1403-1420

³⁷ Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, 1992, updated in 1997.

³⁸ Kaiser Family Foundation, *Employer Health Benefits*, 1999.

³⁹ Specifically, the shares reported here include estimates of PPO enrollments provided by the Gartner Group.

decline to 27.4 percent and 29.9 percent when all managed care products are considered.

- In Denver, the “dominant” HMO is Kaiser Foundation Health Plans of Colorado with a share of 40.6 percent. Its share declines to 19.3 percent using the more appropriate, broader market definition.

Second, focusing on only the single largest HMO, as Foreman does in his identification of Metropolitan Statistical Areas (MSAs) with a “dominant” plan, ignores all the other competing plans in the MSA. As noted earlier, when plans are already established in a geographic area, it is generally not difficult for them to expand their enrollments through competitive product offerings. In fact, even ignoring non-HMO firms that compete in the broader product market, in the majority of cases there are a substantial number of other HMO-based plans. Nearly 60 percent of the MSAs with a “dominant” plan (whose share exceeds one-third) have at least five HMO plans, and over 80 percent have at least three. In these MSAs, it seems unlikely that a single plan would long be able to “dominate” either the buyers’ or sellers’ markets. Moreover, those markets with at least five plans tend to be much larger markets with substantially greater total HMO enrollments. The average enrollment in the MSAs with a “dominant” firm but at least five plans exceeds 260,000. On the other hand, average enrollments in those MSAs with a “dominant” firm but fewer than five HMOs is less than one-eighth that size, or fewer than 30,000. Clearly, these MSAs either have small total populations or are located in areas with little managed care penetration. It is therefore not surprising that they are relatively concentrated.

Foreman’s Estimates of the Campbell Bill “Benefits”

Foreman correctly asserts that the Charles River Associates analysis does not include an assessment of the potential benefits of legislation promoting physician antitrust waivers. This omission is deliberate, given the availability of less costly mechanisms to remedy any of the perceived problems in the market, should they exist. The CRA study does discuss the alleged justification of “leveling the playing field” that Foreman and other proponents of the legislation put forth. It notes that the economic literature has shown that “bilateral monopoly or oligopoly” situations, in which both sides in a bargaining session have power, produce ambiguous outcomes for consumers. Preferable strategies, therefore, result in the elimination of both parties’ market power through equitable and effective enforcement of the antitrust laws.

Foreman concludes his report with a hypothetical simulation of the welfare benefits that could result if health plans were currently paying health professionals less than it cost them to provide services, and a waiver from the antitrust laws forced these plans instead to pay competitive rates. Foreman claims that this analysis represents a reasonable estimate of the benefits of the antitrust waiver legislation. However, since it is based on a series of unverifiable assumptions and is poorly explained, his calculations should more

reasonably be considered as a totally theoretical exploration of what might occur if it could be shown that his assumptions and model were true.

Foreman begins by assuming that payments by managed care organizations to physicians in one-quarter of all Metropolitan Statistical Areas are currently below cost, but provides no evidence to support this assumption. He then applies a model derived from the transportation industry that breaks down the losses associated with monopsony prices into price and quantity effects. He assumes (again without justification) that half of the uninsured is a relevant measure of the quantity effect,⁴⁰ while the assumed difference between his estimated cost of physician services (based on the Interstudy assumptions cited above) and the amount paid to those physicians who are paid below the estimated cost is his price measure. In fact, this measure is based on crude MSA-level averages reported only by HMOs. It seems unlikely that physicians would agree to accept payments that Foreman alleges are 18.4 percent below cost, since no single plan accounts for a dominant portion of a physician's total revenue when all payers are considered.⁴¹ Instead, this measure, as are most others on which Foreman relies, is likely an error.

Even if these assumptions were defensible, his calculation appears to be in error. His formula suggests that his calculation should equal $\frac{1}{2} \times 22.1 \text{ million} \times \86.28 . This calculation results in a total of approximately \$950 million rather than the \$1.9 billion that Foreman concludes represents the welfare benefit of legislatively condoned collective negotiations. Given the total lack of support for the numerical assumptions made or for the model that is used, combined with the apparent arithmetical error, Foreman's exercise in assessing "benefits" is completely without merit.

It would be more relevant to consider benefits that accrue from *not* enacting legislation that would grant health professionals the right to negotiate collectively. As discussed above, availability of affordable health insurance is critical to prevent a further increase in the rate of the uninsured. Moreover, various studies have documented the frequency of inappropriate provision of services absent effective utilization review protocols.⁴² These

⁴⁰ In fact, Foreman's report leaves ambiguous exactly how he measures the quantity effect, since his description is clearly missing several key words: His entire description of the quantity effect (p. 22) reads as follows: "and 6Q is the difference between."

⁴¹ Foreman describes payments as 18.4 percent below *marginal* cost. At best, the data provide an estimate of *average* costs.

⁴² For example, a study determined 18 percent of hysterectomies to be inappropriate, while 25 percent were performed for uncertain reasons (S.J. Bernstein, E.A. McGlynn, Ph.D.; A.L. Siu, et al., "The Appropriateness of Hysterectomy. A Comparison of Care in Seven Health Plans," *Journal of the American Medical Association* 269 (1993): 2398-2402). A RAND study of Medicare beneficiaries found 17 percent of coronary angiographies, 32 percent of carotid endarterectomies, and 17 percent of upper gastrointestinal endoscopies performed were unnecessary (M.R. Chassin, J. Kosecoff, R.E. Park, et al., "Does Inappropriate Use Explain Geographic Variations in the Uses of Health Care Services? A Study of Three Procedures," *Journal of the American Medical Association* 258 (1987): 2533-2537). Another study found 21 percent (12 million) of all antibiotic prescriptions were used to treat colds, other upper respiratory tract infections, or bronchitis – conditions that rarely respond to treatment with antibiotics. Treatments for women and in rural practices were associated with higher antibiotic prescription rates. The results of such overuse include possible adverse drug reactions and an increase in antibiotic resistance in patients (R. Gonzales, J.F. Skinner, M.A. Sande, "Antibiotic Prescribing for Adults with Colds, Upper Respiratory Tract Infections, and

benefits seem far more real than the speculative and incorrect calculation provided by Foreman.

Conclusion

Stephen Foreman, in his report prepared for the American Medical Association, has attempted to show that the likely costs of physician antitrust waiver legislation such as that proposed by Representative Thomas Campbell are much smaller than those estimated by Charles River Associates in its report prepared for the Health Insurance Association of America. Moreover, Foreman contends that the legislation will bring measurable benefits to consumers in terms of greater access to health care.

However, the data and models that Foreman uses to estimate costs and benefits are so seriously flawed as to render all of his results meaningless. In addition, as the discussion above highlights, his criticisms of CRA's approach are unfounded as they reflect a misunderstanding of the research and data underlying the CRA report.

Bronchitis by Ambulatory Care Physicians," *Journal of the American Medical Association* 278 (1997): 901-904).