ATTACHMENT

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UNITED STATES OF AMERICA,

Plaintiff,

v.

UNITEDHEALTH GROUP INCORPORATED and SIERRA HEALTH SERVICES, INC.,

Defendants.

Civil No. 1:08-cv-00322

Judge: Ellen S. Huvelle

Filed: 2/25/2008

Affidavit of Professor David Dranove

I. Qualifications

I am the Walter McNerney Distinguished Professor of Health Industry Management at the Kellogg School of Management, as well as the Director of the Center for Health Industry Market Economics and the Director of *Health at Kellogg*. I have studied health care competition for over 20 years and have published numerous books and peer reviewed papers on the topic. My vita is attached.

I have also studied the Nevada health care market place, paying particular attention to physician markets in Clark County. This includes examining secondary data and supervising a physician survey. I am submitting this affidavit because I am concerned about the potential anticompetitive impact of the merger of UnitedHealth Group and Sierra Health Services, particularly the impact on the market for physician services.

II. Background[1]

The proposed merger between UnitedHealth Group and Sierra Health Services would create the largest private health insurer in Nevada. The Antitrust Division of the US Department of Justice (DoJ) has reviewed this merger and filed a Complaint, Competitive Impact Statement, and Proposed Consent Order that narrowly focus on conduct and a remedy in the output market for Medicare Managed Care insurance. Specifically, UnitedHealth will be required to divest its Medicare Managed Care offerings as a condition for DoJ approval.

I have extensively researched health care competition, including competition among insurers. I have also studied the Nevada healthcare marketplace, including conducting interviews and a

[1] The American Medical Association paid for the time I spent researching the Nevada market and preparing this affidavit.

survey of Nevada physicians that I describe below. In my opinion, the DoJ focus on the Medicare Managed Care market is too narrow. In particular, the proposed remedy is inadequate because it fails to address the potential for the United/Sierra merger to create monopsony power in the market for the purchase of physician services.[2] It also does not address the potential for a dominant insurer to limit competition by such arrangements such as most favored nation contracts and bundling of contracts.

In the remainder of this affidavit, I explain why I believe the United/Sierra merger raises concerns about monopsony power in the market for purchasing physician services and also why it poses a substantial threat of anticompetitive behavior in output markets. With regards to the issue of monopsony in particular, I am concerned that the DoJ did not apply the proper economic analysis. I discuss monopsony in detail in sections III-VI of this affidavit. Section VII presents a shorter discussion of other issues. My main conclusion is that the United/Sierra merger may pose a substantial risk of harm in the market for the purchase of physician services that would adversely affect both healthcare providers and consumers, and that this risk was apparently underestimated by the DoJ.

III. Theory of Monopsony Power

Market Definition

In order to determine whether a merger poses a risk of the exercise of market power, or in this case, monopsony power, it is essential to first define the market in which competition takes place. Markets are defined in both product and geographic dimensions. Competition between United and Sierra takes place in both input and output markets; I am focusing on input markets.

Market definition requires defining both a product market and geographic market. I will first consider the product market. Insurers purchase many inputs, including physician services. There are no adequate substitutes for physician services, due both to training and licensing laws. Moreover physicians are confined to supplying services within their training and licensures and cannot do something else in response to a decrease in compensation. Thus, the purchase of physician services represents a relevant product market.[3]

I believe that a relevant geographic market consists of an area no larger than the Las Vegas metropolitan area, which can be approximated by Clark County. This is a relevant geographic market from an input market perspective because physicians have limited alternatives in responding to a decrease in compensation. Physicians could not, for example travel to Los Angeles for additional business.[4] At the same time, insurers offering provider networks to Las Vegas area employers and employees could not expect to do business if their networks excluded Clark County providers. Thus, I believe it is indisputable that physician services in Clark County comprise a relevant market for antitrust analysis.

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[2] Merger analysis focuses on the potential exercise of market power. "Monopsony power" is the power to decrease prices paid to producers or service providers who have little opportunity to sell other than to the monopsonist.

[3] There may well be even smaller markets within the physician services market, such as markets for specific specialties.

[4] Moreover, from the output market perspective the market is limited to Clark County. Insurers must market their provider networks to employers, who in turn make the network available to their employees. Most firms draw their workers from local areas, such as metropolitan areas. For example, it would be impractical for a Las Vegas casino to offer its employees a physician network that relied on physicians outside of Clark County.

It Is Appropriate to Exclude Medicare and Medicaid

Competitive concerns arise whenever a firm, through merger, eliminates an important rival and gains the ability to influence prices. This is why market share calculations are so important to assessing mergers.

A critical issue in determining the likely effect of a medical insurer merger on the market for physician services may be whether to center the analysis on the commercial market share affected by the merger and to exclude Medicare and Medicaid, which are typically two of the largest purchasers in any medical market. The DoJ does not discuss potential monopsony power in the input market that I have defined, perhaps because it included Medicare and Medicaid beneficiaries in its calculation of buyer side market shares, and as a result the market shares of United and Sierra were not large enough to rise to the level of monopsony. But careful consideration suggests that the market for measuring monopsony power does not include Medicare and Medicaid.

A useful place to start thinking about this problem is to consider the more familiar problem of defining output markets. Suppose there are four firms – A, B, C, and D – equally dividing an output market. Suppose that firm A raises price by, say, $2 per unit. In the absence of collusive behavior, this effort is likely to fail, because consumers who are unhappy about the price increase will purchase the product from B, C, or D. This helps explain why antitrust analysts are rarely concerned about the potential exploitation of market power when there are many sellers in a market.

Now consider the same market with the same four sellers, only this time B, C, and D are capacity constrained. If A raises its prices, its consumers would either accept the increase or do without the product. They would not be able to take their business elsewhere. This gives seller A effective monopoly power over its customers. Thus, it is the ability of consumers to *redirect their business away from a high price seller*, and not the number of sellers *per se*, that limits a seller's ability to increase its prices.

The same intuition applies to monopsony. Suppose there are four purchasers of an input, again labeled A, B, C, and D. If purchaser A attempts to reduce the wage it pays for the input by $2 per unit, suppliers of the input would offer their services to purchasers B, C, and D. Thus, A's effort will fail. But if purchasers B, C, and D are constrained in the amount of labor inputs they can use in production, then sellers *will not be able to redirect their output* to these purchasers.[5] This gives purchaser A effective monopsony power over its suppliers.

With this intuition in hand, consider the market for physician services. Physicians who agree to participate in the network of insurer A accept a discounted fee from A in exchange for an expectation of higher volume. Physicians who do not agree to participate may still treat insurer A's enrollees as "out of network" patients, often requiring those patients to pay higher fees.

[5] Workers might offer their services to B, C, and D, but if these firms accept, they would have to lay off other workers, who in turn would face the same tradeoff as the new hires—work for A or stop working.

Suppose A reduces physician fees. As noted by the DoJ in their complaint against the merger between United and PacifiCare,[6] the ability of A to sustain this fee reduction "depends on the physician's ability to terminate (or credibly threaten to terminate) the relationship. A physician's ability to terminate a relationship with a commercial health insurer depends on his or her *ability to replace the amount of business lost from the termination* (emphasis added), and the time it would take to do so. Failing to replace lost business expeditiously is costly."[7]

In determining the potential exercise of monopsony power I assume the DoJ considered the options available to physicians. Physicians might refuse to contract with A. Insurer A's patients would then have to go out-of-network or seek a different insurer who has kept a broad network. (This is analogous to the case where the would-be monopsonist lowers its wages and suppliers offer their services elsewhere.) Physicians might be proactive, joining rival networks and encouraging patients (and their employers) to switch plans. As a result, insurer A might end up with fewer enrollees. In this way, the presence of rival purchasers is essential if physicians are to have a "credible" ability to terminate their relationship with insurer A.

Physicians cannot increase volume or revenue by persuading their patients to sign up for Medicare, however, because enrollment in these programs is limited to the elderly and disabled.[8] Nor can physicians collectively treat more Medicare patients, because there are a limited number of patients and there is no means to increase the volume of patients. Thus, insurer A cannot lose physician business to Medicare; Medicare's business is fixed. Thus, from the perspective of physicians, the Medicare population is fixed. An analogous argument applies to Medicaid.

Even if physicians could collectively increase their Medicare and Medicaid workloads, this would not be an attractive alternative because Medicare, and, especially Medicaid, typically pay significantly lower rates than do private insurers. Medicaid rates are so much lower than most private insurer rates that few physicians would consider dropping insurer A in favor of Medicaid business even if insurer A lowered its rates appreciably.

The above argument demonstrates that when defining a relevant market for contracting for physician services, and computing market shares in that market, it is appropriate to exclude Medicare and Medicaid. Medicare and Medicaid do not represent viable alternatives for physicians who face lower fees from a monopsonist insurer. Because Medicare and Medicaid are large purchasers of physician services, excluding them from market share calculations will profoundly change inferences about market shares and monopsony power.

IV. Evidence on Monopsony Power

Physician Survey and Interviews

In my investigation I conducted physician telephone interviews in which I asked them about the competitive environment and how they might respond to the United/Sierra merger. Based on these interviews I developed and oversaw a survey of physicians in Clark County. We sent

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[6] *United States v. UnitedHealth Group Inc.,* Case No. 1:05CV02436 (D.D.C. Dec. 20, 2005), *available at* http://www.usdoj.gov/atr/cases/f213800/213815.htm

[7] Complaint at Paragraph 36.

[8] The exception is Medicare managed care, as recognized by the DoJ consent order.

surveys via e-mail, fax, and mail to the administrators of all 122 medical group practices identified in Clark County using the Universe File of the Medical Group Practice Association and to a random sample of 333 office-based physicians in the County, drawn from the American Medical Association Masterfile and oversampling primary care physicians and obstetrician-gynecologists. Twenty-four medical group administrators responded (for a response rate of 22.9% after adjustment for invalid and duplicate records). Seventy-three physicians responded (for an adjusted response rate of 27.5%). Additional details of the survey are included as an appendix to this affidavit.[9]

Survey Findings Pertaining to Monopsony Power

A purchaser has monopsony power if it faces "upward sloping supply." That is, the firm is able to reduce the price it pays for inputs without driving all of its input suppliers to other purchasers. One way to assess the potential presence of monopsony power is to determine whether suppliers have viable alternatives in the event they could not sell to the potential monopsonist. If a purchaser had monopsony power, then suppliers would respond in a variety of ways; some would sell to other purchasers, some would do nothing different, and some might even shut down operations. It is this range of responses – the varying degrees of leverage that a purchaser possesses over its suppliers – that characterizes upward sloping supply.

During my telephone interviews, I asked physicians how they would respond to the Sierra/United merger and a potential reduction in payments. Physicians offered a range of responses including closing their practice to doing nothing. To assess this issue more systematically, the survey included the following question: *"What, if anything, would your practice do if United and Sierra merged and you did not continue to have a contract with the merged health plan?"*

Here are excerpts from a sampling of responses:

> I'll go to California
> Close practice
> Leave town
> I would consider relocating to another state or join the VA
> This would hurt the practice tremendously. Actually I don't know what I'll do.
> Nothing at present
> Get on other contracts that will pay higher rates
> Continue to service other health plans
> Make do with remaining plans
> We would be out of network provider and try to increase the other plans available
> Discourage patients from getting United/Sierra health insurance

The range of responses confirms what my telephone interviews had suggested, namely that some physicians have a viable alternative to United/Sierra but that many others would be harmed by losing the United/Sierra contract. This suggests that United/Sierra would have varying degrees of leverage over physicians, which is consistent with the ability to exercise monopsony power.

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[9] The survey had several limitations. Due to the desire to maximize responses, the survey was kept deliberately short. This limited our ability to tailor survey questions to address specific economic issues. Despite the brevity of the survey, the response rate was too low to reach definitive conclusions. Even so, the findings were sufficiently suggestive that, in my opinion, the DoJ should have investigated these issues more thoroughly.

These data suggest that the United/Sierra merger may be creating substantial monopsony power within Clark County. It was incumbent upon the DoJ to explore this issue more thoroughly. Their complaint and the proposed order suggest that they failed to do so.

Market Concentration

In determining the competitive effects of any acquisition it is often important to measure the level of concentration in the market. Unfortunately there is no significant public information available to compute market shares in the market for the purchase of physician services by commercial health insurers. One useful proxy would be the output shares of commercial health insurers. While the Bureau of Health Planning and Statistics of the Nevada State Health Division Department of Health and Human Services (henceforth, the "Bureau") collects data on HMO enrollments by plan and county, its data on PPO enrollments is incomplete.

The consulting firm Interstudy offers an alternative source of information about HMO and PPO market shares through their Managed Market MSA Surveyor and Managed Market State Surveyor data bases. The American Medical Association has used these data to produce a report entitled "*Competition in Health Insurance: A Comprehensive Study of U.S Markets*". Based on the 2007 update of this report, I determined that the market shares for Sierra and United in the Las Vegas metropolitan area (which closely approximates Clark County) were 38% and 18% respectively. The combined market share is 56%. This combined share, as well as the increase in share, raise substantial concerns about monopsony power that the DoJ does not appear to have addressed.

V. Monopsony Power Can Harm Healthcare Consumers

Monopsony power can harm healthcare consumers in several ways. Part and parcel with a reduction in the compensation of physicians will be a reduction in the number of physicians who participate in the monopsonist's network. (This is the natural consequence of a monopsonist moving down its upward sloping supply curve.)[10] The patients who previously utilized the services of physicians who are no longer in the network must now either (a) select another, less preferred physician within the network, or (b) see their prior physician out-of-network and consequently pay higher out-of-network fees. Either way, these patients are worse off than before the exercise of monopsony power.

Even the patients of physicians who remain in the United/Sierra network may be worse off, because the reduction in the fees paid to these physicians may cause them to reduce the quantity and/or quality of services they provide. Physicians who receive lower fees will be forced to do more with less. This may result in longer waiting times as physicians are forced to reduce staffing. Economics teaches that physicians are to be expected to reduce their output; again, this is a standard prediction associated with upward sloping supply. Another standard result from

[10] When supply is upward sloping, a seller with monopsony power profits by reducing the wages it pays, relative to the competitive wage. By doing so, fewer suppliers offer their goods and services, so that the monopsonist ends up reducing the quantity of output it produces.

economic theory is that sellers who experience lower price-cost margins will have less incentive to maintain quality.[11] There is substantial evidence that this occurs in medicine.[12]

Responses to the aforementioned survey question *"What, if anything, would your practice do if United and Sierra merged and you did not continue to have a contract with the merged health plan?"* confirm these concerns about patient welfare. As mentioned previously, some physicians might close their practices. Here are some additional responses:

> Downsize practice
> See a lot less patients
> All patients would have to be self-pay under merged health plan
> Layoff staff and reduce number of physicians on staff
> I would consider having a cash only office

Several telephone interviews offered similar responses. All of these responses would have harmful repercussions for patients.

VI. Why Competition in the Output Market Would not Discipline United/Sierra

A firm might not exercise its monopsony power if doing so harms its consumers who, as a result, turn to alternatives in the output market. In other words, output market competition might discipline the would-be monopsonist. The nature of the provision of medical services works against such market discipline. Suppose that physicians in the United/Sierra network are forced to cut back services in response to fee cutbacks. One might think that this would devalue the United/Sierra products, leaving it at a disadvantage relative to the competition. In other words, if physician services are "public goods," whose quality applies to all of their patients, then the harmful effects of reduced monopsonist fees are felt by all patients and the monopsonist suffers no competitive harm.

There is a public good element in many physician decisions. If physicians reduce their office hours, this is likely to affect access for all of their patients. (Physicians who contract with a monopsonist could not normally limit their availability to the monopsonist'sf patients only.) Similarly, if a physician cuts back on staff and/or equipment, or invests less in continuing education, all patients would suffer. Of course, if the physician exits the market altogether, all patients suffer. If quality is a public good, as I conjecture, then the monopsonist can internalize all the benefits of fee reductions while the harm is felt by patients enrolled by all insurers. Thus, market forces do not necessarily discipline the monopsonist whose aggressive pricing causes quality to suffer.

Concluding Comments about Quality

Unfortunately, the DoJ complaint and consent order are silent on the issue of quality. In both the qualitative interviews and the survey conducted under my supervision, I learned about some of

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[11] See Spence, M. "Monopoly, Quality, and Regulation" *Bell Journal of Economics* 6(2), 1975 and Dranove, D. and M. Satterthwaite, "Monopolistic Competition When Price and Quality are Imperfectly Observable" *RAND Journal of Economics*, 23(4), 1992

[12] Dranove, D. *The Economic Evolution of American Healthcare* Princeton University Press, 2000 reviews this evidence.

the ways that fee cutbacks could harm quality. Some of the alternatives physicians mentioned included exiting the market, curtailing their hours, spending less time with patients and cutting back on staffing. In light of these responses, there should have been greater analysis of the potential impact of the United/Sierra merger on the quality of physician.

VII. Contractual Provisions that raise Competitive Concerns

The purpose of merger enforcement is to prevent the creation of market power or its exercise. In some cases, in order to prevent competitive harm from a proposed merger the antitrust agencies and the courts may impose some type of injunctive relief. In this case, I believe the DoJ should have sought to prohibit two types of arrangements: most favored nation provisions and all products clauses.

Most Favored Nation Provisions

In my experience, many large insurers exploit their size by demanding and receiving most favored nation status from providers. A most favored nation provision requires the provider to offer the dominant insurer the most favorable rate it offers to any other insurer. Both theory and empirical evidence suggest that most favored nation status harms consumers by discouraging providers from aggressively discounting to other insurers.[13] Most favored nation provisions may prevent other insurers from entering or expanding in the market through these favorable discounting arrangements. The DoJ complaint and the proposed consent order are silent on this issue. The DoJ should have required the combined United/Sierra to foreswear MFN as a condition for approving the deal.

Bundling and All Products Clauses

It is also my experience that large insurers often require providers to abide by "all products clauses" whereby a provider who wishes to be a preferred provider for one of the insurer's products must agree to contract for all of that insurer's products. I am particularly concerned about the ability of a large insurer to bundle products in different markets. In particular, I believe that the combined United/Sierra will have monopsony power in the market for securing physician services for privately insured patients. It may now use that market power to bundle together contracting in the Medicare Advantage and private insurance markets. Such bundling would not offer any obvious promise of efficiencies and should be viewed with skepticism by anyone promoting market efficiency.

It is not obvious from the DoJ complaint and consent order whether these issues were investigated or how they were resolved. The DoJ should have explored these issues and if they believed there was potential for such bundling, the combined United/Sierra should have been required to allow physicians to contract separately for private insurance and the Medicare Advantage program.

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[13] For example, see Scott Morton, F. "The Strategic Response by Pharmaceutical Firms to the Medicaid Most-Favored-Customer Rules" *RAND Journal of Economics*, 28(2), 1997 for an exposition of the theory and evidence from pharmaceutical pricing. The theory is broadly applicable to other markets including physician services.

David Dranove
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May 13, 2008

Appendix: SURVEY METHODS

Setup Procedures:
All documents were verified by project client. Documents included the cover letter and survey instrument with a version each for the medical group sample and one for the physician practice sample.

All materials included the logos and respective signatures from: AMA, the county medical society, and the state medical society of Nevada.

The project client provided the sample database of medical groups and physician practices, including the name and phone number of a contact

PRS provide the fax number and address for mailings in the phone calls, as appropriate.

Mailing Procedures Medical Group Sample:

On February 12, 2008 Population Research Systems (PRS) mailed the survey to the medical groups, with a cover letter and business-reply envelope, to the 122 medical group administrators in the Clark County NV medical group file. The outgoing envelope was addressed to the name of the person or the administrator, when available, otherwise the term "Practice Administrator" was included, for example:

Ms. Jean Smith or Practice Administrator
Desert Medical Group
1234 Pine Hill Drive
Las Vegas, 11111.

About 9-10 days after the initial mailing, PRS faxed another survey and cover letter, to all non-respondents from among the 122 group administrators.

Another 5 days later, the sample with non-responders, invalid or missing fax numbers was returned to the project client, who conducted a round of reminder phone calls and updated all invalid fax numbers. Contacted medical groups who requested another fax received one from PRS within 24 hours of that information being provided by the project client. PRS also send another fax to all invalid and missing fax numbers.

About 6 days after the reminder call, PRS sent another round of faxes to all non-responders.

Another 10 days later, PRS initiated another round of faxes to all non-responders, followed immediately by a second round of reminder calls conducted the telephone staff of PRS. PRS attempted every record until a respondent or answering machine was reached, and PRS telephone interviewers left scripted messages on answering machines (see below).

Telephone reminder script
Hi, my name is____, and I am calling on behalf of the AMA. Yesterday, we sent you a fax with a very brief survey about the United / Sierra merger in Clark County, and we are very interested in your opinion. Please take a few minutes to complete the survey and fax it back to the number shown on the cover letter. We will keep your responses confidential.

IF NOT RECEIVED FAX:

Can you confirm your fax number for me so we can send you another fax? _____

We appreciate your participation. Thank you

Response Rate
This effort resulted in a total of 24 completed surveys, out of a sample of 102 records. Of those 102 records, 7 records were invalid (group did not exist, was closed, wrong address/name) and 101 records were duplicates within the sample, resulting in 86 valid records. Out of those 86 valid records, 24 completes constitute a corrected **response rate of 28.2%.**

Count of IDs	
Status	Total
Complete	24
Invalid record	7
No response	61
Duplicate record	10
Grand Total	1021

Mailing Procedures Individual Physician Sample:

On February 12, 2008 PRS email the cover letter and survey embedded in the body of the email message to 353 physicians identified by the project client. PRS inserted the medical society logos into the email itself, as well as the signatures, similar to the Medical Group survey.

About 3 days after the initial e-mail, PRS faxed a reminder survey to all physicians who had not responded at that point. The cover letter for the fax was slightly different from the email cover letter to reflect the change of modus.

Approximately 8 days later, the sample with non-responders, invalid or missing fax numbers was returned to the project client, who conducted a round of reminder phone calls and updated all invalid fax numbers. Contacted medical groups who requested another fax received one from PRS within 24 hours of that information being provided by the project client. PRS also send another fax to all invalid and missing fax numbers.

About 7 days after the reminder call, PRS sent another round of faxes to all non-responders.

Another 6 days later, PRS initiated another round of faxes to all non-responders, followed immediately by a second round of reminder calls conducted the telephone staff of PRS. PRS attempted every record until a respondent or answering machine was reached, and PRS telephone interviewers left scripted messages on answering machines (see script above).

During this process, PRS noted that 13 records of the original sample were duplicates (duplicate email, address and fax number, and those records were replaces with another 13 records, resulting in a final total of 353 records.

Response Rate

This effort resulted in a total of 73 completed surveys, out of a sample of 353 records. Of those 353 records, 55 records were invalid (group did not exist, was closed, wrong address/name) and 13 records were duplicates within the sample, resulting in 285 valid records. Out of those 285 valid records, 73 completes constitute a corrected **response rate of 25.6%.**

Count of IDs	
Status	Total
Complete	73
Invalid record	55
(blank)	212
Duplicate record	13
Grand Total	353