Group's report for the Illinois Legislature similarly concluded that, concerning the ability of CON laws to increase the quality of care,

> even the strongest supporters of maintaining the program agree that the area where CON can directly influence quality is narrow....CON laws' impact on quality and care is limited.

[Page ii]. An earlier study from 1999 performed by the Washington State Joint Legislative Audit and Review Committee entitled "Effects of Certificate of Need and Its Possible Repeal," likewise stated, "The evidence is weak regarding the ability of CON to improve quality by concentrating volume of specialized services." [Page 3].

C. CON does not improve access to care.

There is little evidence that CON positively affects access to care. For example, in 2003 the Michigan Department of Community Health commissioned two noted CON public policy scholars at Duke University to evaluate Michigan's CON program. That study, entitled "Evaluation of Certificate of Need in Michigan," found that "CON has limited ability to impact the overall cost of health care or to address issues raised by care for the uninsured and underinsured." [Page 132]. The 2007 Illinois legislative study performed an extensive economic analysis that compared the profit margins of safety-net hospitals in CON-states with safety-net hospitals in non-CON states. The study concluded that its collective research and analysis "do not support the argument that CONs provide a protective effect for safety-net hospitals' financial status" [Page 28] The Georgia legislative commission study found that CON's affect on access was no more than "mixed." [Page 72]. Academic literature examining CON's purported affect on access has reached similar conclusions.

D. Conclusion

In summary, 36 states have some form of CON law. Of those states, West Virginia ranks in the top five in terms of restrictiveness, which is contrary to the national trend of not expanding CON programs. Therefore, based on state legislative CON activity that I have been following for several years, I can tell you that West Virginia's recent decision to authorize a more restrictive CON rule is not in the norm.

I applaud the West Virginia Legislature for its willingness to evaluate its CON Laws, as a number of other state legislatures have recently done. Such an evaluation may be particularly appropriate now, since conclusive evidence demonstrates that CON does not control and may add to health care costs, CON is not an effective means of quality improvement, and CON does not promote access to health care. As the Illinois legislative report perhaps stated best "our results are consistent with a body of literature that indicates CON rarely achieves its stated goals." [Page 28]. I hope that you find this information useful as you think about your own state's CON program.

Thank you

Certificate of Need hinders health care innovation

1. **Posted by The Birmingham News October 14, 2007 2:00 AM**

By MICHAEL MORRISEY and MICHAEL CIAMARRA

Entrepreneurs and innovators are developing new ways to deliver health care that are more convenient, higher in quality and less costly than currently available health services. The level of scientific knowledge that will be discovered over the next 25 years will be four to seven times greater than the past 25 years, and we can expect dramatic breakthroughs and discoveries in health care that stagger the imagination.

Unfortunately, bureaucratic relics of the past often stand in the way of developing a 21st century, intelligent health system.

Alabama's Certificate of Need is an amazing program that requires hospitals, nursing homes and other medical facilities such as ambulatory surgery centers and diagnostic imaging facilities to have the explicit approval of the state before they can operate. When implemented in the 1960s and 1970s, CON was intended to control rising health-care costs that resulted from cost-based reimbursement.

What is amazing is that there is virtually no rigorous empirical evidence that the program has been effective in reducing hospital or health-care costs and some evidence that it increases costs. This was true in the heyday of the program in the 1980s and is still true in more recent evaluations. Yet, CON continues to exist for hospitals in Alabama and 25 other states and effectively limits new hospital construction and even needed renovation.

Consumers don't save money as a result of the CON program. Currently, hospitals and other protected providers argue that CON

keeps new providers from coming in and taking the profitable patients. It certainly does. Another way to say this is that existing providers are collecting prices which are higher than their costs and probably higher than the new entrants would charge. So, by their own admission, we pay higher prices.

CON provides less choice and less innovation.

Entry of new ambulatory surgical providers is no trivial issue. We all have friends or family members who have had an ambulatory procedure performed that only a few years ago would have required a day or more in the hospital. The American Hospital Association reported that in 2004, there were more than 1.7 outpatient surgeries conducted in U.S. hospitals for every one surgery that required an overnight stay. Ambulatory surgery centers represent a competitive alternative to hospitals for these outpatient procedures.

Nationally, recent research suggests that on average, every free-standing ambulatory center per 100,000 population in a metropolitan area is associated with a reduction of 4.3 percent in the number of hospital-based outpatient procedures. The battle in Georgia was over entry of new providers and choices and ultimately over who gets the patients. In states like Georgia, North Carolina and Alabama, the CON agency plays a big role in deciding who gets the patients and what access those patients have to new technology.

CON is not only focused on keeping out new forms of health care delivery, it is also concerned with how, or even if, existing providers can serve their communities. One need look no further than the burgeoning U.S. 280 corridor in Birmingham or the growth in Madison County near Huntsville to appreciate that many people in increasingly congested areas of the state now have longer travel times to get to a hospital.

In both communities, existing hospitals (and new providers) would

almost certainly be willing to build in the growth corridor. Much of what stops them is the CON process. Any proposed action will be opposed by existing hospitals in the community because of the threat to their established patient flow. So, in addition to the usual construction and operating costs, an effort to expand will be tied up with CON hearings, decisions, appeals and more appeals.

Finally, Alabamians needn't be reminded of the embarrassment of a former governor and a former hospital CEO who were convicted in a federal bribery case associated with an appointment to the Alabama CON board.

Regulatory agencies that provide protection from market competition and thereby offer the potential for substantial profits are tempting targets for unscrupulous politicians, bureaucrats and businesses. These temptations can be overcome with sufficient monitoring and careful processes, but it seems foolish to go through all of that for a program that doesn't provide benefits to the citizens of the state.

The CON program never controlled costs and has become a mechanism to limit competition in health care, making all of us worse off. Alabama's CON is a hindrance. Seven years ago, The Birmingham News noted, "It's time Alabama consider whether CON should be tossed into the dump heap." It's past time. It's time now for the Legislature to dismantle CON completely.

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Competition in Healthcare and Certificates of Need

MARK J. BOTTI
Chief, Litigation I Section
U.S. Department of Justice, Antitrust Division

Before A Joint Session of
The Health and Human Services Committee of the State Senate
and
The CON Special Committee of the State House of Representatives
of the General Assembly of the State of Georgia

February 23, 2007

Good afternoon. I want to thank Chairman Thomas and Chairman Cooper for their invitation to the Antitrust Division of the U.S. Department of Justice to appear before you today and to share our views on the impact of Certificate of Need ("CON") laws on healthcare markets.

My name is Mark Botti. I am the Chief of the Litigation I Section of the Antitrust Division. My group has approximately 30 attorneys and additional staff dedicated to enforcement of the antitrust laws and advocacy of the importance of competition in a number of sectors of the nation's economy. In particular, we focus to a substantial degree on

healthcare markets. In doing that work, we confer closely with a large team of Antitrust Division economists holding doctorates in the study of markets and their performance, including a number with specialization in the performance of healthcare markets. We also confer closely with the attorneys and economists at the Federal Trade Commission, who also have dedicated time to the study of healthcare markets.

My remarks today are built on the work of these professionals and the Antitrust Division's decades long focus on healthcare markets. Over those years, we have brought many antitrust cases in markets across the country involving hospitals, physicians, ambulatory surgery centers, stand-alone radiology programs, medical equipment, pharmaceuticals and other healthcare products. Through that work we understand the competitive forces that drive innovation in and contain the costs of healthcare. We consult regularly with federal and state agencies responsible for the delivery of healthcare services and the setting of healthcare policy. Our attorneys and economists study the latest academic and policy works in healthcare on an ongoing basis. We have on many occasions met informally and formally with experts in the field. For example, in the first half of the 1990s, the Federal Trade Commission and the Antitrust Division committed substantial resources to the study of competitive markets, out of which effort we prepared a series of nine antitrust enforcement principles that guide industry behavior today.(1) I worked on those enforcement statements and am directly responsible for their application. More recently, in 2003, we conducted 27 days of hearings on competition and policy concerns in the healthcare industry, heard from approximately 250 panelists, elicited 62 written submissions, and generated almost 6,000 pages of transcripts.(2) As a result of that effort, we published an extensive report, entitled *Improving Health Care: A Dose of Competition*, in July 2004.(3) I oversaw the Antitrust Division's work on those hearings and that report and am the designated point of contact at the Division regarding the report.

I. Scope of Remarks

The Antitrust Division's experience and expertise has taught us that Certificate of Need laws pose a substantial threat to the proper performance of healthcare markets. Indeed, by their very nature, CON laws create barriers to entry and expansion and thus are anathema to free markets. They undercut consumer choice, weaken markets' ability

to contain healthcare costs, and stifle innovation. We have examined historical and current arguments for CON laws. They do not provide an economic justification for depriving consumers of the benefits of free markets. To the extent non-economic goals are pursued, the use of CON laws to help pursue them imposes substantial costs. Those goals can be better achieved through other mechanisms. I will explain our reasoning in more detail in just a moment; but first allow me to respectfully suggest to you our bottom line -- we hope you will carefully consider the substantial costs that CON laws impose on consumers as you evaluate whether to reform those laws in your state.

I have not come here today to discuss the details of any particular proposal before you for the reform of Georgia's CON laws. I am, however, generally familiar with the issues before you and recognize them as issues that CON laws present in other states and other markets. My remarks, accordingly, will focus on the impact of and justifications for CON laws generally. For your convenience, I am leaving with you the written text of these remarks with citations to relevant sources included.

In offering these remarks, please understand that it is not the Antitrust Division's intent to "favor any particular procompetitive organization or structure of health care delivery over other forms that consumers may desire. Rather, [our] goal is to ensure a competitive marketplace in which consumers will have the benefit of high quality, cost-effective health care and a wide range of choices . . . ."[4] Our overall mission is to preserve and promote competition, rather than to preserve any particular marketplace rival or group of rivals.

II. Importance of Competition and the Harm Caused by Regulatory Barriers to Entry

A. The Benefits of Competition in Healthcare

Let me set the stage for explaining our concerns about the harm from CON laws by talking for a moment about competition in healthcare generally. No doubt there are aspects of the delivery of healthcare services that make healthcare different from other sectors of the economy. The health of any individual is a sensitive and very important matter. But in our concern over the health and well-being of our fellow citizens, we as government officials should not lose sight of a basic truth -- market forces improve the quality and lower the costs of healthcare services. Increased competition in healthcare markets

does not require us to choose between obtaining the benefits of competition or the delivery of high-quality healthcare. Competition drives innovation and ultimately leads to the delivery of better healthcare. Government intervention can undermine the ability of markets to deliver that benefit.

The proposition that competition cannot work in healthcare is simply not true. Similar arguments, made by engineers and later by lawyers, that competition fundamentally does not work in their industries and is harmful to public policy goals, have been soundly rejected and private restraints on competition have long been condemned.(5) Indeed, at least since the Supreme Court's seminal 1943 decision in a case brought by the Department of Justice against the American Medical Association, competition has played a critical role in shaping the delivery of healthcare in this country. The Antitrust Division and the Federal Trade Commission have worked diligently to make sure that private barriers to that competition do not arise.(6)

During our extensive healthcare hearings in 2003, we obtained substantial evidence about the role of competition in our healthcare delivery system and reached the conclusion that vigorous competition among healthcare providers "promotes the delivery of high-quality, cost-effective healthcare." Competition results in lower prices and broader access to health care and health insurance, and in particular non-price competition can promote higher quality.(7)

This finding is not surprising. We saw in the 1990s the growth of managed care and the impact it had on the cost and availability of insurance. Competition among and between hospitals and physicians intensified with the development of managed care organizations. In addition to putting pressure on costs, managed care plans have pressured providers to use shorter hospital stays and to offer alternative outpatient treatments. This evolution in health care purchasing led to lower costs and increased choice without sacrificing quality. Moreover, lower costs and improved efficiency made health insurance more affordable and available.

Competition also helped bring to consumers important innovations in healthcare technology. For example, health plan demand for lower costs and "patient demand for a non-institutional, friendly, convenient setting for their surgical care" drove the growth of Ambulatory Surgery Centers.(8) Ambulatory surgery centers offered patients more

"convenient locations, shorter wait time, and lower coinsurance than a hospital department."[9] Important to the success of these competitive forces in improving the delivery of care to consumers was the availability of technological advances, such as endoscopic surgery and advanced anesthetic agents.[10] Thus, competition harnessed this new technology and brought it to consumers in the lower cost, more convenient setting of ambulatory surgery centers. The impact on traditional general acute care hospitals led to those hospitals responding to the competition by delivering more care, in a better manner, in an outpatient setting, both at their own campuses and at ambulatory surgery centers in which they invested.

This type of competitive success story has occurred again and again in healthcare in the area of pharmaceuticals, urgent care centers, and elective surgeries such as Lasik procedures, to name just a few. Without private or governmental impediments to their performance, we can expect healthcare markets to continue to deliver these benefits.

For example, we are on the cusp of a potentially significant advance in how competition empowers consumer choice, thus delivering more quality and containing costs. In an August 22, 2006 Executive Order, the President ordered executive agencies to take steps to promote transparency in healthcare quality measures and pricing and to facilitate the development of health information technology.[11] In implementing that directive, the Department of Health and Human Services (HHS), has launched a transparency initiative for value-driven health care that aims to facilitate the delivery of better care at lower costs. Similarly, private health plans have developed products that give consumers greater choice and more information, with an eye toward improving quality while controlling costs. And new companies are entering the market seeking to provide more information and empower consumer choice in healthcare markets.[12] Capturing the promise of these initiatives, HHS has observed that "[c]onsumer choice creates incentives at all levels, and motivates the entire system to provide better care for less money."[13]

B. CON Laws Create Barriers to Beneficial Competition

CON laws are a classic government-erected barrier to entry. As such, they are anathema to competitive markets. Accordingly, in *A Dose of Competition*, the Department of Justice and the Federal Trade

Commission urged the states to rethink their CON laws.[14]

1. Original Cost-Control Reasons For CON Laws No Longer Apply

We made that recommendation in part because the original reason for the adoption of CON laws is no longer valid. Many CON programs trace their origins to a repealed federal mandate, the National Health Planning and Resources Development Act of 1974, which offered incentives for states to implement CON programs. At the time, the federal government and private insurance reimbursed healthcare expenses predominantly on a "cost-plus basis." This is a very important point. The original reason for CON laws was not, as some have argued, that competition inherently does not work in healthcare or that market forces promote over-investment. Instead, CON laws were desired because the reimbursement mechanism, i.e., cost-plus reimbursement, incentivized over-investment. The hope was that CON laws would compensate for that skewed incentive.

In considering this historical justification for CON laws, we need to keep clear that a number of other arguments made in support of CON laws were not part of the rationale for their original adoption:

- CON laws were not adopted around the country as a means of cross-subsidizing care;
- CON laws were not adopted in order to have centralized planning of the location and nature of healthcare facilities; and,
- CON laws were not adopted to protect the health and safety of the population from poor quality medicine.

Instead, CON laws were adopted because excessive capital investments, spurred by the then-current cost-plus method of reimbursement, were driving up healthcare costs. There was concern that, since patients were not price-sensitive, providers engaged in a "medical arms race" by unnecessarily expanding their services to offer the perceived highest quality services.[15]

CON laws appear not to have served well even their intended purpose of containing costs. Several studies examined the effectiveness of CONs in controlling costs. The empirical evidence on the economic effects of CON programs demonstrated near-universal agreement

among health economists that CON laws were unsuccessful in containing healthcare costs.(16)

In addition to the fact that CON laws have been ineffective in serving their original purpose, CON laws should be reexamined because the reimbursement methodologies that may in theory have justified them initially have changed significantly since the 1970s. The federal government no longer reimburses on a cost-plus basis. In 1986, Congress repealed the National Health Planning and Resources Development Act of 1974. Health plans and other purchasers routinely bargain with healthcare providers over prices. Essentially, government regulations have changed in a way that eliminates the original justification for CON programs.(17)

2. Protecting Revenues of Incumbents Does Not Justify CON Laws

I want to address directly one of the most prominent rationales advanced for keeping CON laws, namely, that incumbent hospitals should be protected against additional competition so that they can use their profits to cross-subsidize care for uninsured or under-insured patients.(18) Under this rationale, CON laws would impede the entry of such healthcare providers as independent ambulatory surgery centers, free-standing radiology or radiation-therapy providers, single- or multi-specialty physician-owned hospitals, because if these new competitors were to enter the marketplace, community hospitals could not continue to exploit their existing market power over consumers. Put another way, without CON laws, we would see new, higher-quality, low cost providers in the marketplace, which would put competitive pressure on incumbent providers.

The cross-subsidization rationale essentially turns these laws on their head. What started as laws intended to control costs have become laws intended to inflate prices. Ironically, proponents of CON laws now would use these barriers to entry to accomplish precisely what economic theory would predict barriers to entry usually accomplish -- stifle competition, protect incumbent market power, frustrate consumer choice, and keep prices and profits high.

Please do not misunderstand my point here. We are not accusing community hospital proponents of CON laws of seeking these barriers to entry for some improper purpose. We fully appreciate the laudatory

goal of trying to make sure that community hospitals have sufficient funding so that they can provide healthcare services to those who cannot afford them and for whom government payments are either unavailable or too little to cover the cost of care. But we also want to make clear that the use of government barriers to entry to fund this laudatory purpose has costs. Importantly, to the extent legislatures choose to help cover health care costs for the indigent, there are more efficient ways to accomplish this goal, without incurring the costs of impeding the proper functioning of health care markets. Essentially, by protecting incumbent hospitals from competition, CON laws allow them to tax consumers through the exercise of market power in order to pursue the charitable goal of providing care to other, less fortunate consumers. In using that funding mechanism, however, the CON laws may do more harm than good.

First, CON laws harm the consumers who would have chosen alternative, lower priced, higher quality, or more convenient sources of care.

Second, CON laws impose that cost without any clear evidence that other desired social goals are advanced. Put another way, the evidence to date indicates that new competition does not undercut community hospitals' ability to fulfill their charitable mission. Last year, the federal government studied just this issue in connection with the emergence of single-specialty hospitals around the country. The study found that, for several reasons, specialty hospitals did not undercut the financial viability of rival community hospitals.[19] One substantial reason for this was that specialty hospitals generally locate in areas that have above average population growth. Thus, they are competing for a new and growing patient population, not just siphoning off the existing customer base of the community hospitals.

A third reason why CONs may do more harm than good results from the beneficial effect that new competition has on community hospitals. In studying the effect of single-specialty hospitals, MedPAC found that the community hospitals responded to the competition by improving efficiency, adjusting their pricing, and expanding profitable lines of business.[20] Community hospitals encouraged physicians to perform procedures on the hospital campus by developing centers of excellence and building physician offices on campus.[21] Overall, community hospitals affected by specialty hospital entry maintained profit margins in line with national averages. Rather than undercutting

community hospitals, we have seen that new entry drives them to do a better job. Thus, CON laws harm society in general by depriving it of the increased efficiency that competition would have brought to the health care market.[22]

3. CON Laws Impose Other Costs and May Facilitate Anti-Competitive Behavior

CON laws appear to raise a particularly substantial barrier to entry and expansion of competitors because they create an opportunity for existing competitors to exploit procedural opportunities to thwart or delay new competition. Such behavior, commonly called "rent seeking" conduct, is a well-recognized consequence of regulatory intervention in the market.[23] Essentially, an existing competitor uses the hearing and appeals process to cause substantial delays, leading both the existing competitor and the new entrant to divert significant funds away from delivering healthcare and to spend them on legal fees, consulting fees, and lobbying efforts. Moreover, much of this conduct, even if exclusionary and anticompetitive, is unlikely to be subject to legal challenge as a violation of the antitrust laws because it involves petitioning of the state government by the existing competitor.[24] Indeed, during our hearings, we received evidence of the widespread recognition that existing competitors use the CON process "to forestall competitors from entering an incumbent's market."[25]

We have found that existing competitors at times go further and enter into agreements not required by the CON laws but nonetheless facilitated by them. Two examples arise from West Virginia, and a third comes from Vermont.

In the first West Virginia case, we found that a Charleston, West Virginia hospital used the threat of objection during the CON process, and the potential ensuing delay and cost, to induce a hospital seeking a certificate of need for an open heart surgery program not to apply for it at the location that would have well served Charleston consumers and provided greater competition for their business.[26] Instead, the Charleston hospital successfully prevented the possibility of this competing open heart program. The state authorities never had the opportunity to decide whether under the CON laws that second program would have been approved because of the unlawful

agreement among the hospitals.

In the second West Virgina case, two closely competing hospitals decided to use the CON process to allocate healthcare services between themselves.[27] The hospitals agreed unlawfully that only the one hospital would apply for an open heart program and only the other would apply to provide cancer services. Again, the state took no official action and consumers were deprived of the potential competition between these hospitals.

A third example comes from the State of Vermont. There, home health agencies entered into territorial market allocations, again under cover of the state regulatory program, to give each other exclusive geographic markets.[28] That state's CON laws prevented competitive entry, which normally might have disciplined such cartel behavior. We found that Vermont consumers were paying higher prices than were consumers in states where home health agencies competed against each other.

We have learned from these matters and others that CON laws have the potential to impede competition in ways well beyond what is intended by their supporters.

4. CON Laws Lead To Less Competition and Higher Prices

It is not surprising, given that the prevalent justification for CON laws is to protect the exercise of market power by existing hospitals, that studies show that the removal of CON regulation does not consistently lead to a surge in medical expenditures.[29] Indeed, as one would expect, several studies have concluded that the presence of CON regulations may be responsible for increases in healthcare costs.[30] These findings were supported by the recent study by Georgia State University conducted as part of your state's review. That study showed that rigorous CON regulation is associated with less competitive markets and higher prices for private inpatient care.[31]

III. Framework for Evaluation of CON Laws

My remarks are intended to convey to you our belief that CON laws impose substantial costs on consumers and healthcare markets. In light of these costs, the Antitrust Division believes that Georgia should

carefully consider whether, and if yes, to what degree, its CON laws continue to serve the citizens of this state. We offer the following framework for your consideration:

First, we suggest that the enactment or continuation of CON laws should have a significant, clearly articulated justification, because they are government intervention in the marketplace that create barriers to entry into healthcare markets. That substantial justification should have a basis in serious and persuasive market studies that demonstrate that the market has failed in some significant way.

Second, any evaluation of a proposed CON law should consider not only the justification for the law but also identify and weigh the harm to consumers that is likely to result from creating the barrier to entry. The consideration of these potential harms should include the ways in which the regulations could distort the market, affect incentives, or diminish competition. A state should enact or maintain a CON law only if it finds that the justification does more good than harm.

Third, in cases where the evidence does show a greater benefit than harm from a CON law, we urge you to consider whether you can address the problem in an alternative fashion that preserves competition, or at least is narrowly tailored to remedy only the demonstrated need and preserve as much competition as is possible. A state should only use CON laws to address some problem if that problem cannot be addressed without government intervention in the form of a barrier to entry. If a state must erect a barrier to entry, select the approach that accomplishes the objective with the least disruptive effect on competition.

Let me close by encouraging you not to accept without careful scrutiny claims that elimination of CON laws will visit significant harm on your state. We are unaware of evidence that those states which have eliminated CON laws have suffered such harm. The studies, cited above, in fact suggest that elimination of CON laws leads to improved markets. Accordingly, we encourage you to consider carefully whether the maintenance of those laws or the enactment of new ones best serves your citizens.

Thank you again for the opportunity to discuss our views on how CON laws affect competition and consumers in healthcare. I would be happy to take your questions.

FOOTNOTES

1. Statements of Antitrust Enforcement Policy in Health Care, August 1996, Introduction, pg. 3 (available at http://www.usdoj.gov/atr/public/guidelines/1791.htm) ("1996 Statements").

2. This extensive hearing record is largely available at http://www.ftc.gov/bc/healthcare/ research/healthcarehearing.htm.

3. *Improving Health Care: A Dose of Competition* (July 2004) available at http://www.ftc.gov/reports/healthcare/040723healthcarerpt.pdf. ("*A Dose of Competition*").

4. *See* 1996 Statements, pg. 3.

5. *F.T.C. v. Superior Court Trial Lawyers Ass'n*, 493 U.S. 411 (1990); *National Society of Professional Engineers v. U.S.*, 435 U.S. 679 (1978).

6. *American Medical Association v. U.S.*, 317 U.S. 519, 529 (1943).

7. *A Dose of Competition*, ch. 3 § VIII and Executive Summary at 4.

8. *Id.*, Ch. 3 at 25.

9. Medicare Payment Advisory Commission (MedPAC), Report to the Congress: Medicare Payment Policy § 2F, at 140 (2003), available at http://www.medpac.gov/publications/ congressional_reports/Mar03_Entire_report.pdf.

10. A Dose of Competition, Ch. 3 at 24.

11. http://www.whitehouse.gov/news/releases/2006/08/20060822-2.html.

12. See http://www.revolutionhealth.com.

13. See http://www.dhhs.gov/transparency.

14. *A Dose of Competition*, Executive Summary at 22.

15. *A Dose of Competition*, Ch. 8 at 1-2.

16. David S. Salkever, Regulation of Prices and Investment in Hospital in the United States, in 1B Handbook of Health Economics, 1489-90 (A.J. Culyer & J.P. Newhouse eds., 2000) ("there is little evidence that [1970's era] investment controls reduced the rate of cost growth").

17. *A Dose of Competition* at 1-6.

18. *Id.*, Ch. 3 at 36-40.

19. *See* MedPAC 2006 Report.

20. Other studies have found that the presence of for-profit competitors leads to increased efficiency at nonprofit hospitals. Kessler, D. and McClellan, M., "The Effects of Hospital Ownership on Medical Productivity," RAND Journal of Economics 33 (3), 488-506 (2002).

21. Greenwald, L. et al., "Specialty Versus Community Hospitals: Referrals, Quality, and Community Benefits," *Health Affairs* 25, no. 1 (2006): 116-117. *See also* Stensland, J. and Winter, A., "Do Physician-Owned Cardiac Hospitals Increase Utilization?" *Health Affairs* 25, no. 1 (2006): 128 (some community hospitals have responded to the presence of specialty hospitals by recruiting physicians and adding new cardiac catheterization labs).

22. For similar reasons, we have not found persuasive other arguments, such as community planning or quality of care as reasons for erecting barriers to entry through CON laws.

23. Joskow, Paul and Rose, Nancy, "The Effects of Economic Regulation." *Handbook of Industrial Organization*, vol. 2, Schmalensee and Willig, eds., Amsterdam: North-Holland, 1989.

24. The *Noerr-Pennington* doctrine of antitrust law holds that under the First Amendment, it cannot be a violation of the federal antitrust laws for competitors to lobby the government to change the law in a way that would reduce competition. *See Eastern Railroad Presidents Conference v. Noerr Motor Freight, Inc.*, 365 U.S. 127 (1961) ("no violation of the [Sherman] Act can be predicated upon mere attempts to influence the passage or enforcement of laws"); *United Mine Workers v. Pennington*, 381 U.S. 657 (1965) ("joint efforts to

influence public officials do not violate the antitrust laws even though intended to eliminate competition").

25. *A Dose of Competition*, Executive Summary at 22.

26. *United States v. Charleston Area Medical Center, Inc.*, Civil Action 2:06 -0091 (S.D.W.Va. 2006) (available at: http://www.usdoj.gov/atr/cases/f214400/214477.htm).

27. *United States v. Bluefield Regional Medical Center, Inc.*, 2005-2 Trade Cases ¶ 74,916 (S.D. W.Va. 2005).

28. Department of Justice Statement on the Closing of the Vermont Home Health Investigation (Nov. 23, 2005) (available at http://www.usdoj.gov/atr/public/press_releases/ 2005/213248.htm).

29. Christopher Connover and Frank Sloan, Evaluation of Certificate of Need in Michigan (2003) (available at http://www.michigan.gov/mdch/0,1607,7-132-2945_5106-83771--,00.html).

30. Daniel Sherman, Federal Trade Commission, "The Effect of State Certificate-Of-Need Laws On Hospital Costs: An Economic Policy Analysis" (1988) (strong CON programs may increase costs); Christopher Connover and Frank Sloan, Evaluation of Certificate of Need in Michigan (2003) (available at http://www.michigan.gov/mdch/ 0,1607,7-132-2945_5106-83771--,00.html) (CON in some instances may have raised costs).

31. The Effect of Certificate of Need Laws on Cost, Quality, and Access (Georgia State University, Oct. 2006); Report of Data Analyses to the Georgia Commission on the Efficacy of the CON Program, at 9 (Nov. 2006).

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About *PH&S*

About Providence Health & Services in Alaska

May 10, 2007

Providence Health & Services (PH&S) is positioned to dominate the state's health care market indefinitely with three times more operating revenue than its closest competitor, $321 million budgeted to build new facilities between 2005 and 2008, and the former Alaska Commissioner of Health and Social Service in charge of strategic development.

PH&S Alaska operates four hospitals and many other ventures in south-central Alaska. The company has no presence outside of south-central Alaska.

According to PH&S's newly released 2006 financial statement, PH&S Alaska produces the highest profit margins of all PH&S regions. In 2006, Providence Alaska created $57 million in total profit for a 9.6% margin. While the Alaska division produces 10% of PH&S operating revenue, it generates 16% of the system's operating profit.

Providence Alaska Medical Center in Anchorage alone accounts for almost half of all hospital admissions in the state. The company employs more than 4,000 people, making it Alaska's largest private employer.

Operations

Anchorage:

Anchorage is the base for PH&S in Alaska. The company operates one of the city's two general acute care hospitals as well as long term care and assisted living facilities, the Providence Physician Service Organization, and an ambulatory surgery facility (Providence Surgery Centers, LLC). The company also recently opened the 60-bed St. Elias Specialty Hospital as a for-profit joint venture with BridgeCare, an Alabama based firm.

Providence Alaska Medical Center (PAMC)
PAMC is the largest hospital in Alaska. The 363-bed facility accounted for 42% of the state's total acute care hospital admissions in 2005—and more than half of all hospital profit in the state. PAMC provides a full range of medical, surgical, and tertiary services at the main hospital, Providence Children's Hospital, Providence Cancer Center, Providence Heart Center, and Providence Maternity Center. Providence LifeGuard Air Ambulance transports patients by helicopter from facilities around the state to PAMC. In 2005 PAMC posted $29.5 million in net profit, or a 6.8% total margin.

PH&S Alaska Hospitals – 2005*		
	PH&S hospitals avg.	Alaska hospitals avg.
Alaska Market Share by admissions	47%	n/a
Operating profit margin	4.7%	5.9%
Total profit margin	8.3%	5.5%
Occupancy Rate**	57%	56%

NOTE: PH&S Alaska figures are only for their acute care hospitals in 2005. Neither complete figures for PHS Alaska in 2005 nor hospital-level information for 2006 are available to date.
*The state of Alaska does not collect or distribute hospital financial or utilization data. Audited financial statements from each of Alaska's sixteen acute care hospitals were used to compute these figures.
** Occupancy rates were calculated using total inpatient days reported in audited financials divided by available bed days as reported in Medicare cost reports.

Mary Conrad Center
This 90-bed nursing home has been managed by Providence since 1986. PH&S Alaska describes the skilled nursing and rehabilitation services facility as a "home-like environment."

Providence Extended Care Center
This 224-bed long-term care facility is the largest in Alaska.

Beyond Anchorage:

Providence operates three municipally owned hospitals outside Anchorage—operating facilities at Seward and Valdez under management agreements and a facility at Kodiak under a lease.

Providence Seward Medical Center (PSMC)
Providence has operated a 6-bed hospital and a 43-bed long term care facility in Seward since 1996. In 2005, PSMC lost $402,000 for a -3.7% total margin.

Providence Valdez Medical Center (PVMC)
The City of Valdez pays PH&S to manage this 11-bed hospital and a 19-bed long term care facility. In 2005, PVMC lost $146,000 for a -1.9% total margin.

Providence Kodiak Island Medical Center (PKIMC)
Providence began managing this 25-bed hospital and a 19-bed long-term care facility in 1998 under a 10-year renewable lease from the Kodiak Island Borough (KIB). PH&S collects no management fee and actually pays the borough $720,000 annually for the right to operate the facility. In 2005, PKIMC posted a $769,000 profit for a 3.6% total margin.

Growth

PH&S is cementing its dominance in Alaska with a plan to spend $321 million to build a host of new facilities by 2008, including:

- new medical office buildings
- a heart institute
- another cancer center
- administrative offices
- visitor housing and
- a 40-acre commercial development that 'surrounds' the competing Mat-Su Regional Medical Center.

Expanding its strength in the long-term care market, PH&S opened the for-profit St. Elias Specialty Hospital in Anchorage on December 18, 2006. This $24 million facility, a partnership between PH&S and Bridgecare Hospitals from Alabama, is the only one of its kind in the state. St. Elias Specialty Hospital focuses on non-critical patients requiring long-term acute care, and will receive patients from hospitals throughout the state. Once St. Elias Specialty Hospital demonstrates that patients stay at the hospital an average of more than 25 days, administrators say that they will seek certification by Medicare as a long-term acute care hospital.

The State of Alaska is currently considering applications for certificates of need for seven PH&S Alaska projects totaling $48 million. The most controversial project seems to be the proposed imaging center in the Matanuska-Susitna (Mat-Su) Valley.

Providence Projects in Certificate of Need Process – May 9, 2007		
Project	Status	Value
Anchorage – Cardiovascular Observation Area Expansion	Application Complete	$ 1,312,575
Anchorage - Catheterization Labs	Application Complete	$5,001,614
Anchorage - Outpatient Therapy Services	Application Received	$3,643,586
Anchorage Ambulatory Surgery Center	Hearing Scheduled	$9,600,000
Seward - Providence Wesley Care Center	CON Approved	$26,100,000
Anchorage Abbott Road Imaging Facility	Appealed	
Mat-Su Imaging Services	Appealed	
Total		$47,657,775

Matanuska-Susitna Valley Controversy

After losing a bid to partner with the Valley Hospital Association, PH&S Alaska is aggressively undermining the new community hospital in Mat-Su Valley, first by purchasing land surrounding it, and now by seeking to open a competing imaging center without Certificate of Need approval.

In 2002, the Valley Hospital Association decided to build a new community hospital in the Matanuska-Susitna Valley that could treat more patients locally. Lacking the cash to undertake the project, the association's board entertained several proposals, and ultimately entered into a joint venture with for-profit Triad Hospitals, Inc. Under the agreement, Triad agreed to spend up to $75 million on the new facility, maintain a local presence on the board of directors with 50%

of the board's vote, and proportionately share the hospital's profits with the community. The association rejected a bid from Providence out of concern that the company would push to stabilize patients and then transfer them to Providence Anchorage Medical Center rather than keeping them at "our own full-fledged hospital" said Elizabeth Ripley, spokeswoman for the Mat-Su Valley hospital. "We wanted to deliver care locally," she said.

The community broke ground on the new 74-bed Mat-Su Regional Medical Center on May 17, 2004 and opened its doors on January 27, 2006.

Shortly before the deal with Triad was approved, Providence had announced it had purchased an option to buy 99 acres of land just south of the new Mat-Su hospital. In June 2005, Providence announced that it would relocate two of its physician clinics to a new medical office building it was developing on the land. In December 2005, Providence announced a joint venture with the Imaging Associates of Providence (IAP) radiology group. The joint venture, Mat-Su Imaging Services, would locate in the new office building.

Providence did not file an application for a certificate of need for the imaging facility; but in March 2006 Norman Stephens, CEO of the new Mat-Su hospital, wrote to Health Commissioner Karleen Jackson asking the state to investigate whether or not a certificate of need was required. In doing so, Stephens said, "Mat-Su Regional Medical Center may be adversely and substantially affected by the violation of the Certificate of Need statute..."

Commissioner Jackson agreed with PH&S Alaska that the imaging facility was actually a physician's office, not a "health care facility," and was therefore exempt from the certificate of need requirements. Mat-Su appealed, arguing that "IAP does not meet the exemption for physician offices as its majority investor is a hospital, Providence Health System. Every day that IAP is allowed to continue operating its MRI is a violation of the law and financially penalizes Mat-Su Regional." (Imaging is a widely known as a lucrative health care business that acute care hospitals often resent because independent imaging operations can "cream" revenue away from a hospital's fragile service mix.)

Jackson rejected that appeal. She reversed herself, however, after a court ruled that an independent diagnostic testing facility in Fairbanks, Alaska, required a Certificate of Need. She informed IAP on August 17, 2006 that a certificate of need would be required for Mat-Su Imaging Services.

At the request of Ed Lamb, CEO of Alaska Regional Medical Center, Jackson informed Providence that IAP's Anchorage Abbott Road Imaging Facility would also require a certificate of need.

Providence appealed both decisions. Administrative Law Judge Terry L. Thurbon consolidated the cases in November 2006, and is now considering the matter.

PH&S Alaska currently owns at least 40-acres of land that surrounds the Mat Su Regional Medical Center. The former Providence employee who secured the land purchase while he worked for the hospital now holds a 10-year development agreement that gives him exclusive rights to develop the property, where he hopes to build a hotel, retail and office space, and several "destination restaurants." Asked about the property "in the vicinity of the new Valley Hospital," Providence Alaska Region CEO Parrish stated, "It's not only in the vicinity, it completely surrounds it."

Executives

Al Parrish became CEO of the Providence Alaska Region in 2002 after working in the Alaska tourism industry for the previous 20 years. In a recent interview, Parrish acknowledged PH&S Alaska's ambitious plans, saying, "It probably does give the appearance, which is an accurate appearance, that we really have a lot of irons in the fire. But the need was there and we said we will address that need." Providence reports Parrish's 2005 salary as $417,841.

Robert Dvorak earned a $338,162 salary in 2005 for his work as Providence Alaska's chief financial officer.

Susan Humphrey-Barnett is the area operations administrator for PH&S Alaska, where she is in charge of operations outside of PAMC. Her 2005 salary was $191,844.

Joel Gilbertson, former Alaska Commissioner of Health and Social Services, is now regional

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THE COMPETITIVE EFFECTS OF NOT-FOR-PROFIT HOSPITAL MERGERS: A CASE STUDY*

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Applying conventional horizontal merger enforcement rules to nonprofit hospitals is controversial. Critics contend that the different objective function of not-for-profits entities should mitigate competitive concerns about mergers involving nonprofit hospitals. We analyze a merger that reduced the number of competitors (both nonprofit) in the alleged relevant market from three to two. We find that the transaction was followed by significant price increases; we reject the hypothesis that these price increases reflect higher post-merger quality. This study should help policymakers assess the validity of current merger enforcement rules, especially as they apply to not-for-profit enterprises.

I. INTRODUCTION

ALTHOUGH RESEARCHERS have made innumerable attempts to analyze the relationship between competition (as proxied by concentration) and performance (e.g., price), empirical evidence on the actual competitive effects of horizontal mergers is scarce. Perhaps this is not surprising. When assessed by contemporary antitrust standards, most mergers (even most horizontal mergers) do not present a serious risk of competitive harm. The handful that do typically either will be blocked in their entirety, or approved conditional on the completion of some remedial action (e.g., the divestiture of a critical competitive asset to a third party) designed to ameliorate the risk of competitive harm. Hence, candidates for the study of (plausibly) anticompetitive mergers will arise only infrequently; when, for example, the enforcement agencies lose a merger challenge in court, obtaining no competitive relief, or when the enforcement agencies do not challenge a transaction for reasons unrelated to the transaction's perceived competitive effects.

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This paper takes advantage of one of these rare opportunities.[1] We provide an econometric analysis of a horizontal merger in a concentrated hospital market, Dominican Santa Cruz Hospital's acquisition of its sole rival in the city of Santa Cruz, California, AMI-Community Hospital. According to the FTC, only two competitors—both not-for-profit—remained in the relevant market after the transaction.[2] Absent substantial efficiencies, or a credible threat of entry, standard antitrust analysis would predict that an increase in concentration of this magnitude likely would lead to higher equilibrium prices for both competitors. Consequently, this transaction would have been challenged by the FTC, had the Commission been able to intervene before the transaction was completed.[3] However, because the transaction was too small (in absolute size) to trigger the Hart-Scott-Rodino filing thresholds, the FTC did not receive prior notification of the transaction, and the parties were able to consummate the acquisition before the FTC could seek a preliminary injunction. Ultimately, the FTC entered into a consent order with Dominican Hospital, but the decree required only that Dominican notify the Commission prior to any further acquisitions in the relevant geographic market—it did not restore the premerger market structure. For this reason, this acquisition provides an excellent opportunity to assess, *ex post*, the actual, as opposed to the predicted, competitive consequences of a horizontal merger.

This study should be of interest for at least two reasons. First, as noted, empirical studies of the price effects of horizontal mergers are comparatively rare, notwithstanding their apparent importance to appraising the efficacy of federal merger enforcement policy. Studies such as this should help policymakers assess whether the enforcement decision rules embodied in the *Merger Guidelines* predict with an acceptable degree of accuracy the competitive consequences of actual horizontal mergers.

Second, and more specifically, the applicability to hospital markets of the antitrust agencies' approach to horizontal merger analysis (i.e., the *Merger Guidelines*) recently has been called into question. A substantial share of hospital output (approximately 90%) is produced by private and public nonprofit hospitals. Critics have contended that the antitrust agencies and courts have assumed that these not-for-profit providers seek maximum profits, notwithstanding the substantial body of theoretical and

[1] Both the Federal Trade Commission and the Department of Justice have unsuccessfully challenged other horizontal hospital mergers. However, these transactions are less amenable to empirical analysis than the Dominican Santa Cruz-Community merger because (1) the transactions are too recent to allow measurement of post-merger market performance, and/or (2) reliable price data do not exist.

[2] See Complaint *In the Matter of Santa Cruz Hospital, et al.* 118 F.T.C. 382 (1994).

[3] See Statement of Chairman Janet D. Steiger in Support of Final Issuance of Consent Order *In the Matter of Dominican Santa Cruz Hospital, et al.* 118 F.T.C. 382 (1994).

empirical analyses suggesting that nonprofit entities—or more specifically, certain types of nonprofit entities—will eschew opportunities to profitably exercise market power.[4] For example (see Lynk [1995], pp. 440–41), it is conceivable that a private nonprofit hospital sponsored and administered by the local community, might function something like a consumer cooperative. If so, the incentives of producers and consumers would be aligned, and any incentives the hospital might otherwise have to raise prices anticompetitively would be attenuated. Alternatively, the behavior of a nonprofit hospital whose profits are used to fund some particular set of activities valued by the firm's managers—e.g., providing charity care to the poor——might be indistinguishable from that of an identically situated for-profit entity.

Whether the (potentially) different incentive structure of not-for-profit hospitals could attenuate the exercise of market power is of more than just academic interest. The courts that must adjudicate horizontal merger challenges also have found such arguments compelling. In at least one case,[5] a US Federal District Court found that the nonprofit, community-sponsored status of the merging parties was an important factor in rebutting an otherwise convincing *prima facie* case against the merger of two rival hospitals.

The transaction analyzed here provides an excellent opportunity to explore these possibilities. The acquiring entity (Dominican Santa Cruz Hospital) is part of a chain of Catholic hospitals operating in the western United States. Its sole remaining rival in Santa Cruz county, Watsonville Community, is a locally-sponsored community hospital. According to the arguments set forth above, Watsonville Community would appear to be the type of nonprofit hospital least prone to exercise market power; any such propensity to charge competitive prices would, moreover, place a powerful post-merger competitive constraint on Dominican's ability to raise prices. Consequently, an analysis of both entities' post-merger pricing behavior should provide a valuable insight into the behavior of nonprofit producers.

II. PREVIOUS STUDIES OF HOSPITAL COMPETITION

Many studies of hospital competition have been carried out using a variant of the 'Structure-Conduct-Performance' (S-C-P) paradigm. Early (i.e., pre-1983) studies frequently found a *negative* relationship between hospital

[4] See Lynk [1995] for a more detailed review of the relevant theory and evidence.

[5] See *F.T.C. v. Butterworth Health Corporation and Blodgett Memorial Medical Center* (US District Court, Western District of Michigan, Southern Division), September 26, 1996, slip. op. at 27.

concentration and costs,[6] which usually was interpreted as evidence of insurance-induced moral hazard. Studies using data from the mid–1980s and after typically found a *positive* relationship between concentration and price.[7]

While suggestive, these price-concentration studies do not provide direct evidence of the effects of hospital mergers. One problem with drawing inferences about the competitive effects of mergers from this literature is that the results are almost surely sensitive to the way the geographic markets are defined, since this definition will determine the value of the concentration index.[8]

An alternative empirical strategy for assessing the consequences of merger-induced changes in market structure is to examine directly, through a comparison of the pre- and post-merger prices charged by the merged entity (and, perhaps, its plausible rivals). This 'event study' approach obviates the necessity of defining the 'relevant market.' If the merger creates market power, then (after suitably controlling for other possible shifts in the exogenous determinants of price) one should observe the merged entity raising its price post-merger. It is unnecessary to identify the relevant market to carry out this test—at minimum, one requires only data for the merged entity.

Early applications of the event study method (e.g., Barton and Sherman [1984]; Kim and Singal [1993]) used a relatively simple specification: they analyzed movements in the price of the product affected by the merger, relative to the price of a substitute product hypothesized to face similar demand and cost conditions, but unaffected by the merger. The equality of pre- and post-merger prices was then tested using a simple t test. Later implementations of the event study method (e.g., Schumann *et al.* [1992, 1997]) used a somewhat different approach—they estimated a price equation with data spanning the pre- and post-merger periods.[9] The competitive effect of the transaction was captured with a dummy variable set equal to one for the post-merger period. This method is potentially problematic if there are unobserved exogenous determinants of price that are correlated with the merger dummy. If so, the merger coefficient would reflect the competitive effects of the transaction, as well as movements in

[6] For a comprehensive review of this literature see Pauly and Vita [1994]. For seminal works see Joskow [1980] and Robinson and Luft [1985].

[7] See, e.g., Dranove *et al.* [1993]; Melnick *et al.* [1992]; Keeler, Melnick and Zwanziger [1999]; and Simpson and Shin [1998].

[8] For example, see Keeler and McClellan [1999] and Werden [1989]. Only the former have offered an alternative method for defining antitrust markets. Although there seldom may be good practical alternatives to patient flow data, it is nonetheless true that antitrust markets defined on this basis may lead to incorrect conclusions about the competitive constraints faced by a particular pair of merging hospitals.

[9] The control variables consisted of demand and cost shifters.

these unobserved price determinants, leading one to incorrectly estimate the price effects of the transaction.

Below, we propose an empirical framework that combines elements of the Barton and Sherman, and Schumann *et al.* approaches. We believe that this strategy will provide the best method for identifying accurately the competitive effects of the acquisition. Before setting forth this empirical strategy, we first describe in greater detail the events of the Dominican-Santa Cruz transaction.

III. HISTORY OF THE TRANSACTION

On March 8, 1990, Dominican Santa Cruz Hospital ('Dominican'), a 259-bed, not-for-profit hospital, affiliated with the Catholic Healthcare West system, purchased the only other hospital in the city of Santa Cruz, AMI-Community Hospital ('Community'). Community, which was affiliated with American Medical International, was licensed for 180 beds and was a for-profit entity. Dominican and Community were located about two miles apart. Five months after the acquisition (August 1990), Community was converted completely to a nursing home/rehabilitation facility. The only other hospital in Santa Cruz county was Watsonville Community Hospital, located about 14 miles south of the city of Santa Cruz. The city of Santa Cruz is located about 40 miles south of San Jose, and 80 miles south of San Francisco. Santa Cruz county is bordered on the south and west by the Pacific ocean, and on the north and east by the Santa Cruz mountains.

Contemporaneous data on patient flows showed that the overwhelming majority (about 94%) of the three Santa Cruz county hospitals' patients resided in Santa Cruz county, and that most (about 97%) Santa Cruz residents receiving inpatient hospital care received it from hospitals in that county.[10] The patient flow data also showed that very few—less than 2.5%—of the patients at the next closest set of competitors originated in Santa Cruz county.[11] In short, there was very little evidence to suggest that residents of Santa Cruz county regarded out-of-county hospitals as good substitutes for in-county hospitals, or that Santa Cruz county hospitals sought to attract patients from outside of the county. Accordingly, the FTC's complaint alleged that the relevant geographic market was 'Santa Cruz County and/or portions of Santa Cruz County.' Only two

[10] Nine Santa Cruz county ZIP codes account for over 80% of the privately insured inpatients at the two hospitals.

[11] The next closest competitors (Community Hospital of Los Gatos and Good Samaritan Hospital) were both located in Los Gatos (Santa Clara County). Both hospitals were approximately 25 miles (41 minutes driving time) from Dominican Santa Cruz Hospital. Watsonville Hospital, by contrast, was only 14 miles from Dominican (23 minutes driving time).

hospitals—Dominican and Watsonville Community—remained in this market post-merger. According to the Complaint, the merger increased the market share (of patient-days) of Dominican from 62% to approximately 73%, and increased the market share (of available beds) from 50% to 73%. The Herfindahl-Hirschman Index for the relevant antitrust market increased by over 1,700 points (from approximately 4,620 to approximately 6,350) when measured by patient-days; and by over 2,300 points (from approximately 3,770 to approximately 6,090) when measured by available beds. Under the *Merger Guidelines* enforcement criteria, a transaction generating concentration figures of this magnitude would be presumed anticompetitive. Absent compelling evidence that such a merger would create substantial efficiencies, or that the exercise of market power would be constrained by the threat of entry, normally the FTC would seek to preliminarily enjoin such a transaction.[12] Had the FTC had the opportunity to seek a preliminary injunction in this case, it would have done so.[13] However, as noted earlier, the small absolute size of the transaction failed to trigger the Hart-Scott-Rodino filing thresholds, and the FTC was not able to seek an enforcement action until after the transaction was completed.

In March, 1993, approximately three years after the merger was consummated, the FTC accepted a consent agreement with Dominican Santa Cruz Hospital and Catholic Healthcare West. The consent order did nothing to restore the pre-merger competitive environment; it required only that the respondents obtain the Commission's prior approval before acquiring any other hospitals in Santa Cruz County. Although all of the FTC Commissioners concluded that the merger probably had created significant market power, a majority of the FTC Commissioners concluded that the agency had few good remedies available to it.[14] The acquired hospital, Community, already had been converted to a skilled nursing/rehabilitative care facility. Thus, the effects of the merger could have been reversed only at considerable cost. Further, Sutter Health, a major Northern California hospital chain, had announced plans to construct an acute care hospital in Santa Cruz, and had already purchased a 3.8 acre

[12] According to the 1992 *Merger Guidelines* (§0.51(c)), 'the [FTC] regards markets [with HHIs above 1800] to be highly concentrated . . . [when] the post-merger HHI exceeds 1800, it will be presumed that mergers producing an increase in the HHI of more than 100 points are likely to create or enhance market power or facilitate its exercise.'

[13] As then-FTC Chairman Steiger observed at the time, '[t]he facts of this case provide sufficient reason to believe that this acquisition violates Section 7 of the Clayton Act. Ordinarily, such facts would lead the Commission to seek a preliminary injunction in federal district court.' See Statement of Chairman James D. Steiger in Support of Final Issuance of Consent Order *In the Matter of Dominican Santa Cruz Hospital, et al.* 118 F.T.C. 382 (1994).

[14] See Statements of Chairman Steiger, Commissioner Azcuenaga, and Commissioner Yao *In the Matter of Dominican Santa Cruz Hospital, et al.* 118 F.T.C. 382 (1994).

site toward that end.[15] The FTC reasoned that entry by this entity likely would already have occurred by the time divestiture could be completed, thereby moving the market closer to the pre-merger status quo more rapidly than could be accomplished through the FTC's administrative process. As it turned out, some time in the second quarter of 1996, Sutter Health opened the Sutter Maternity and Surgery Center with 30 licensed and 21 staffed beds.

IV. EMPIRICAL ANALYSIS: METHODS AND DATA

IV(i). *Basic Price Regressions*

We begin our empirical analysis by first presenting some basic descriptive information on the behavior of prices at the two remaining Santa Cruz county hospitals. Our measure of price is derived from data supplied by the Office of Statewide Health Planning and Development (OSHPD). For each quarter (1986 through 1996, inclusive) we calculate the average net revenue received per inpatient acute-care admission (or, alternatively, per patient day[16]) for privately insured patients.[17] Of course, hospitals provide numerous inpatient services, some of which may or may not be demand- or supply-side substitutes. Nevertheless, a single measure of inpatient price is consistent with the so-called 'cluster' approach to defining hospital product markets used in virtually all hospital merger investigations.[18]

[15] *Sacramento Business Journal*, March 16, 1992.

[16] All of the estimates carried out with dependent variables defined as per-day values are available at the *JIE* Editorial website.

[17] In the OSHPD data, there are various categories for both gross and net patient revenue. Net revenue is equal to a hospital's gross revenue minus any discounts that it offers. In the data, the *gross* revenue figures distinguish between inpatient and outpatient revenue, however, the *net* revenue figures do not. As noted by Dranove *et al.* 1993], failure to account for discounts seriously understates the effect of competition on price. Thus, several adjustments must be done in order to obtain estimates of net inpatient *revenue* from the gross inpatient data. While OSHPD has been collecting quarterly data from hospitals since approximately 1980, data prior to 1986 did not in any way distinguish revenue by payor group. As a result, observations from prior to 1986 were eliminated. For data from 1986 to 1992, net inpatient price was calculated by multiplying total net revenues from non-Medicare, non-Medicaid patients by the ratio of gross *inpatient* revenue to gross *total* revenue at the hospital. While this net revenue figure eliminates Medicare and Medicaid patients it does include revenue from some patients in various non-Medicaid indigent programs. This net revenue figure is then divided by discharges to obtain the average price paid per non-Medicare, non-Medicaid acute-care inpatient. We also adjusted the number of discharges by the ratio (total revenue-bad debt/total revenue) in order to account for bad debt.

For data after 1992, patient revenue for various indigent programs is reported in a separate category. In order to keep the observations consistent over time, revenue from this category was added to the revenue figures for commercially insured patients. Net price was then calculated using the same methodology as outlined for the 1986 to 1992 data.

[18] For a critical overview of the 'acute care inpatient' product market definition used in hospital merger investigations, see Sacher and Silvia [1998].

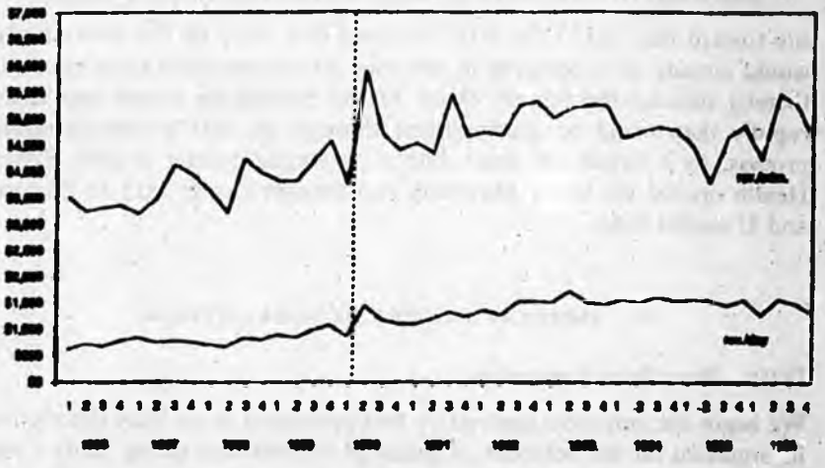

Figure 1
Quarterly Real Price per Admission and per Inpatient Day Dominican Hospital

It should be noted that the price series in Figure 1 does not include information on Community's prices. Normally, we would like to assess the competitive effects of a merger by examining the pre- and post-merger prices of both transaction partners. Unfortunately, that approach is not feasible here because Community was converted to a nursing home/rehab center shortly after the acquisition, and no post-transaction price data are available for it.[19] We have concluded, therefore, that the best available test of the impact of removing this competitive constraint on Dominican's pricing discretion is obtained from comparing Dominican's pre- and post-merger prices; accordingly, the regression results reported in Table III below are based on this comparison. However, to assess the robustness of these results, we also carried out all of regression analyses presented in Table III using (pre-merger) dependent and explanatory variables redefined as weighted averages of the values for Dominican and Community. Our principal findings are robust to this modification.[20]

Figures 1 and 2 depict the behavior of per-day and per-admission prices at Dominican and Watsonville hospitals for the entire sample period. The dashed vertical line indicates the quarter in which the merger occurred. Visual inspection of these series suggests that while there was an upward trend in real prices predating the transaction, prices did increase

[19] The conversion was completed by August 1990. OSHPD ceased reporting separate data for Community after the 1st quarter of 1990.

[20] We experimented with weights based on patient days, patient discharges, and inpatient revenue. All produced essentially the same results. The results reported at the *JIE* Editorial website are derived using inpatient revenue weights.

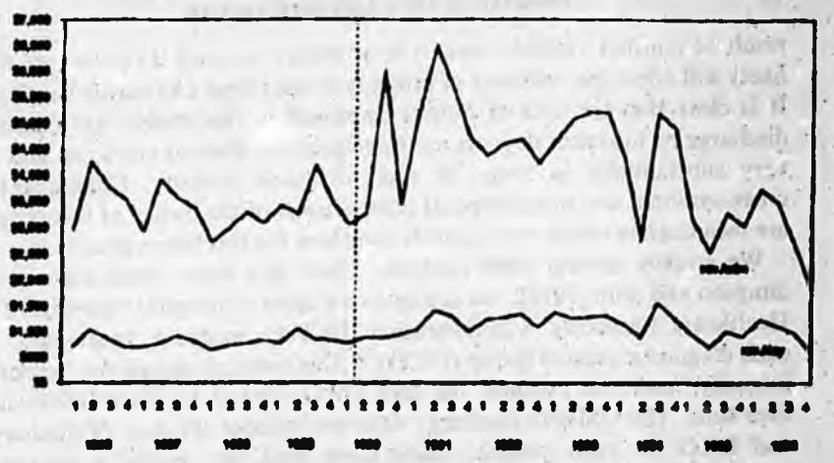

Figure 2
Quarterly Real Price per Admission and per Inpatient Day Watsonville Hospital

in the transaction's aftermath. This assessment is supported by the regression results reported in column (a) of Tables III and IV. Here we present simple regressions of price (real net revenue per admission) on a merger dummy variable (merge) and a time trend (time and time-squared).[21] These regressions suggest a substantial post-merger price increase at both Dominican and Watsonville, on the order of $700 and $1,800 respectively, even when the time trend is controlled for explicitly. We reject the null hypothesis of no merger effect at all conventional significance levels.

While the results contained in Tables III and IV are consistent with a merger-induced increase in price, obviously the simple specification on which they are based will fail to control for many of exogenous determinants of equilibrium prices (except to the extent that they follow a linear-quadratic time trend). If these omitted factors are correlated with merge we will improperly impute their effect to the merger. Similar to Schumann *et al.* (1992, 1997), we next attempt to estimate a more fully specified reduced form price equation.

IV(ii). *Reduced Form Price Equations*

To ensure that the observed price effect of the merger is not merely the

[21] As noted previously, all of the equations reported in the paper also have been estimated with the dependent variable computed on a per-inpatient day basis. In the fully specified version of the price equations, we find that the statistical significance of the coefficient on merge falls in the Dominican equation ($p = 0.18$), but increases in the Watsonville equation ($p = 0.07$).

result of omitted variable bias, it is necessary to control for factors that likely will affect the behavior of prices both over time and across hospitals. It is clear that the unit of output employed in this study—an inpatient discharge or inpatient day—is nonhomogeneous. Patient stays can and do vary substantially in terms of their resource intensity. Consequently, cross-sectional and intertemporal comparisons of the 'price' of this output are meaningless unless one controls somehow for this heterogeneity.

We employ several such controls. First, like other researchers (e.g., Simpson and Shin [1998]), we construct an index of hospital 'casemix.' The Healthcare Financing Administration (HCFA) assigns a 'caseweight' to each diagnostic related group (DRG).[22] This index measures the 'resource intensity,' used, on average, for each DRG relative to other DRGs and over time. The OSHPD discharge data set includes the date of discharge and DRG for each patient. Using these data, we created a quarterly casemix indicator for each hospital used in the empirical analysis. This was done as follows. Each non-Medicare/non-Medicaid discharge at each hospital for each quarter was weighted using the HCFA caseweight index for the relevant DRG. The weighted discharges were then summed and divided by the total number of discharges for each quarter at each hospital to obtain the casemix index.

As a further control for discharge heterogeneity, we also include the average length-of-stay for privately insured patients. The rationale for including this measure is straightforward—each additional day of hospitalization requires the consumption of additional labor and material resources. One cannot compare the price of a discharge across different time periods, or across different hospitals, unless one controls for variations in length-of-stay.

Equilibrium hospital prices also will be affected by exogenous changes in factor prices. We include two variables to control for these shifts. First, HCFA computes a wage index for all urban areas (a county or set of counties) based on the salaries and wages of various health care workers in the relevant locale. This index is used to adjust hospital payments under the Prospective Payment System (PPS) for Medicare. As an additional control variable, we include the BLS Producer Price Index for surgical and medical instruments and apparatus.

It is well-established empirically that the growth of managed care institutions (e.g., HMCs, PPOs) has facilitated more intense price competition among hospitals (e.g., Dranove, Shanley, and White [1993]; Kralewski *et al.* [1992]), as well as greater productive efficiency. Consequently, other things equal, we would expect to observe lower prices

[22] DRGs refer to a system of classifying patients based on medical diagnoses and surgical procedures. Originating at Yale University during the 1970s, the DRG system has been widely adopted by payers and providers as a way of classifying patients.

in markets where selective contracting by managed care organizations is more prevalent. Ideally, we would like to utilize some measure of the market share of managed care institutions in the relevant market. Unfortunately, such data are not readily available. As a proxy, we calculate for each hospital the percentage of total discharges for which the expected payment source is an HMO or other prepaid health plan.[23]

Similar to other empirical studies of hospital mergers (e.g., Lynk [1995], Simpson and Shin [1998]), we include a number of other variables to control for exogenous demand- and cost-side variation. These consist of per capita income, the county-level unemployment rate, county population density, share of admissions covered by Medicare, share of admissions covered by MediCal, and the Producer Price Index for medical and surgical equipment.

Last, we also control for the effects of the October 1989 northern California earthquake, which may have reduced (exogenously) Watsonville's productive capacity, leading to higher prices for reasons unrelated to the Dominican transaction. To capture the competitive effects of this event, we create a dummy variable (quake) equal to 1 for the 4th quarter of 1989 and all subsequent periods, and 0 otherwise. We also include a dummy variable (entry) indicating the entry of the small (21 bed) Sutter hospital in 1996.

We note that the earthquake dummy variable is potentially problematic for us, since it is highly collinear with the merger dummy. Essentially, there are only two quarters of data (1989:Q4–1990:Q1) that differentiate these two variables. This may make it difficult to estimate the respective effects of these two events on price with any precision.[24] That said, there are reasons to doubt that the quake actually had an economically significant impact on Watsonville's productive capacity. Whether measured by total patient days or total discharges, the OSHPAD data suggest that Watsonville's output actually increased in the aftermath of the quake.[25]

Column (b) of Tables III and IV presents the reduced form price regressions for Dominican and Watsonville, respectively. In the case of

[23] We recognize that this managed care index quite plausibly is an endogenous variable jointly determined with our price variable; as a consequence, its inclusion could induce simultaneous equations bias in our estimated coefficients. Accordingly, we estimate our equations both with and without this variable. None of our results are sensitive to this change in specification. These results are reported in full at the *JIE* Editorial website.

[24] We note, however, that in the several of the Watsonville regressions, the coefficients on both merge and quake are individually significant, suggesting that there is sufficient variation in the sample to accurately estimate both parameters.

[25] A regression of total patient days against a time trend and the quake dummy yields a coefficient on quake of 803.51 (s.e. = 480.65). A similar regression using total discharges yields a coefficient (standard error) on quake equal to 53.18 (182.24) The full regression results are available at the *JIE* Editorial website.

Dominican, adding these additional explanatory factors to the reduced form price equations leaves the coefficient on merge essentially unchanged (it actually increases slightly, from $696/admission to $749/admission), but it does increase the standard error of the estimate, from $169 to $474. The corresponding t statistic (1.61) leads one to reject the null hypothesis of no merger price effect at the $p = 0.12$ significance level. For Watsonville,

TABLE I
VARIABLE DEFINITIONS

Variable Name	Description
rprice_d	real net revenue per private admission, Dominican Hospital
rprice_w	real net revenue per private admission, Watsonville Hospital
rprice_p	real net revenue per private admission, peer group hospitals
rpday_d	real net revenue per private day, Dominican Hospital
rpday_w	real net revenue per private day, Watsonville Hospital
rpday_p	real net revenue per private day, peer group hospitals
expadm_d	real expense per admission, Dominican
expadm_w	real expense per admission, Watsonville
expadm_p	real expense per admission, peer group hospitals
expday_d	real expense per inpatient day, Dominican
expday_w	real expense per inpatient day, Watsonville
expday_p	real expense per inpatient day, peer group hospitals
length-of-stay_d	average length-of-stay, Dominican Hospital
length-of-stay_w	average length-of-stay, Watsonville Hospital
length-of-stay_p	average length-of-stay, peer group hospitals
medi-Cal share_d	share of admissions MediCal, Dominican Hospital
medi-Cal share_w	share of admissions MediCal, Watsonville Hospital
medi-Cal share_p	share of admissions MediCal, peer group hospitals
medicare share_d	share of admissions Medicare, Dominican Hospital
medicare share_w	share of admissions Medicare, Watsonville Hospital
medicare share_p	share of admissions Medicare, peer group hospitals
casemix_d	casemix index, Dominican
casemix_w	casemix index, Watsonville
casemix_p	casemix index, peer group hospitals
popdensity_p	population density, peer group counties
popdensity_s	population density, Santa Cruz County
hmo_d	share of admissions HMO insured, Dominican
hmo_w	share of admissions HMO insured, Watsonville
hmo_p	share of admissions HMO insured, peer group
income_s	real per capita income, Santa Cruz County
income_p	real per capita income, peer group counties
ppi_med	producer price index, medical and surgical instruments
unemploy_p	unemployment rate, peer group counties
unemploy_s	unemployment rate, Santa Cruz County
wage_d	HCFA wage index, Dominican
wage_w	HCFA wage index, Watsonville
wage_p	HCFA wage index, peer group
quake	= 1 for 4th quarter 1989 and after, 0 otherwise
merge	= 1 for 2nd quarter 1990 and after, 0 otherwise
entry	= 1 for 2nd quarter 1996 and after, 0 otherwise
time	time trend
timesquared	time trend squared

estimating the price effect of the merger using the expanded set of regressors reduces the estimated merger effect from $1,843 per admission to $496 per admission. In contrast to Dominican equation, the standard error on the merger coefficient falls with the addition of these regressors to the equation. In this specification, we reject the null hypothesis of no merger effect at the $p = 0.10$ significance level.

TABLE II
DESCRIPTIVE STATISTICS

Variable Name	Mean	Minimum	Maximum
rprice_d	4434.55	3212.89	5882.0
rprice_w	3897.98	1794.32	6490.128
rprice_p	5088.39	3526.29	6288.39
rpday_d	1192.75	623.53	1730.41
rpday_w	994.16	593.75	1566.64
rpday_p	1342.72	783.33	1626.55
expadm_d	4118.93	3212.4	4986.1
expadm_w	3343.72	2582.8	3969.6
expadm_p	4038.26	3185.62	4628.92
expday_d	719.92	497.07	962.92
expday_w	756.47	581.91	1064.58
expday_p	810.87	554.70	1116.33
length-of-stay_d	4.01	2.71	5.63
length-of-stay_w	3.99	2.71	6.79
length-of-stay_p	4.28	3.53	4.88
medi-Cal share_d	0.14	0.051	0.17
medi-Cal share_w	0.29	0.10	0.48
medi-Cal share_p	0.21	0.17	0.25
medicare share_d	0.39	0.33	0.44
medicare share_w	0.31	0.22	0.48
medicare share_p	0.39	0.36	0.42
casemix_d	0.85	0.75	1.04
casemix_w	0.76	0.67	0.87
casemix_p	0.94	0.84	1.06
popdensity_p	88.55	78.69	95.69
popdensity_s	516.96	486.10	539.57
hmo_d	0.25	0	0.50
hmo_w	0.06	0	0.25
hmo_p	0.13	0.05	0.23
income_s	16104.97	14464.69	17700.51
income_p	13214.04	12892.70	13504.33
ppi_med	121.19	107.27	131.27
unemploy_p	10.46	8.02	14.23
unemploy_s	8.35	5.37	13.83
wage_d	1.22	0.97	1.42
wage_w	1.20	0.97	1.39
wage_p	1.16	1.12	1.23
quake	0.659	0	1
merge	0.63	0	1
entry	0.11	0	1
time	22.5	1	44
timesquared	667.5	1	1936.0

Table III
Dominican Hospital Price and Expense Regressions
(standard errors* in parentheses)
Quarterly Data, 1986–96

	net rev./ admission (a)	net rev./ admission (b)	net rev./ admission (difference) (c)	exp./ admission (difference) (d)
merger	696.50‡ (169.31)	749.68 (474.71)	1005.49§ (506.40)	172.74 (139.75)
income		−0.30† (0.12)	−0.16 (0.22)	−0.27‡ (0.07)
popdensity		−5.45 (23.99)	29.86 (34.57)	4.36 (8.45)
unemploy		−72.30† (31.26)	−36.61 (55.09)	16.61 (31.19)
length-of-stay_d		406.26† (177.77)	469.45† (178.71)	30.81 (65.81)
hmo_d		−683.03 (1021.08)	−868.32 (1403.21)	229.97 (652.09)
census_d		−1609.06 (1793.83)	1630.76 (1355.49)	−857.21 (908.89)
wage_d		−177.02 (390.12)	−603.42 (905.70)	−616.17† (297.87)
ppi_med		71.25 (70.36)	94.55 (87.17)	−34.73 (38.73)
medicare share_d		3005.44 (2623.12)	5191.34 (3122.95)	−1409.13 (1847.34)
medi-Cal share_d		1076.23 (3032.58)	4752.39 (3579.07)	1581.30 (1082.95)
time	68.60‡ (14.48)	31.19 (88.26)	−170.48 (109.39)	−10.24 (30.01)
timesquared	−1.18‡ (0.25)	−0.54 (1.00)	1.44 (0.96)	0.79† (0.34)
quake		263.89 (290.56)	207.52 (302.42)	407.36‡ (143.69)
entry		634.83† (247.04)	480.23† (219.56)	334.38† (147.97)
intercept	3341.67‡ (120.26)	1118.79 (14136.84)	−21598.48 (19087.51)	2540.66 (5076.65)

*Newey-West heteroskedasticity and autocorrelation consistent standard errors (lag length = 4)
† significant at $p < 0.05$
‡ significant at $p < 0.01$
§ significant at $p < 0.10$.

TABLE IV
WATERVILLE HOSPITAL PRICE AND HERFINDAHL REGRESSIONS
(STANDARD ERRORS* IN PARENTHESES)
Quarterly Data, 1986–96

	net rev./ admission (a)	net rev./ admission (b)	net rev./ admission (difference) (c)	exp./ admission (difference) (d)
merge	1843.47‡ (423.58)	495.92§ (287.98)	671.83§ (399.48)	79.27 (176.02)
income		−0.54‡ (−0.15)	−0.18 (0.21)	−0.22† (0.09)
popdensity		−103.17‡ (22.03)	−51.67 (40.76)	−38.51† (17.75)
unemploy		0.59 (52.02)	77.21 (90.65)	78.68 (45.63)
length-of-stay_w		765.42‡ (170.76)	527.40† (221.85)	388.64‡ (98.50)
hmo_w		−2681.78 (2922.64)	−834.28 (2823.67)	831.62 (1395.01)
casemix_w		7281.31‡ (1655.52)	7529.36† (3318.51)	−676.27 (918.56)
wage_w		−554.65 (1090.64)	−666.00 (1788.47)	178.95 (616.52)
ppi_med		290.81† (118.51)	285.35† (123.90)	81.73 (71.53)
medicare share_w		952.24 (5536.11)	6768.92 (5999.19)	2113.03 (1868.28)
medi-Cal share_w		−3653.65§ (2043.66)	−1989.69 (2238.57)	−1723.45† (688.39)
time	49.74 (33.93)	102.91 (82.25)	−185.62§ (109.71)	−33.61 (45.63)
timesquared	−2.32‡ (0.59)	−2.42§ (1.28)	0.91 (1.40)	0.33 (0.63)
quake		−485.24§ (266.57)	−754.18† (281.97)	−472.39‡ (139.17)
entry		185.66 (404.22)	446.83 (426.99)	−46.91 (121.96)
intercept	3199.53 (304.76)	22994.86 (14053.78)	−7145.13 (19614.65)	7779.72 (6958.94)

* Newey-West heteroskedasticity and autocorrelation consistent standard errors (lag length = 4)
† significant at $p < 0.05$
‡ significant at $p < 0.01$
§ significant at $p < 0.10$.

IV(iii). *Reduced Form Price Estimates with 'Peer Group' Controls*

Although we have attempted to specify the reduced form price equation as fully as possible, it is questionable whether this specification fully captures all of the exogenous factors that might affect the equilibrium prices of the merged entity and its competitors.[26] To better capture the effects of these factors, and thus estimate more precisely the equilibrium impact of the merger, we incorporate into our empirical approach elements of the Barton and Sherman [1984] and Kim and Singal [1993] merger studies. These studies analyzed movements in the price of the product affected by the merger, conditional on the price of a substitute product believed to have faced similar demand and cost conditions, but which is unaffected by the merger. By so doing, they controlled for otherwise unobserved demand and cost factors, unrelated to the merger, that might influence intertemporal price behavior at the merging entities.

The State of California has undertaken two studies to categorize hospitals into 'peer groups' for purposes of setting Medi-Cal reimbursement levels, the most recent in 1991 (Department of Health Services, [1991]). These studies form the basis for the construction of the control group used here. The peer grouping method used by the State of California first placed specialty, teaching, and prepaid hospitals in their own separate peer groups. The study then used 'cluster' analysis to group rural hospitals and other 'unusual' hospitals (*see* State of California [1991], § 5). After the latter were classified into these peer groups, only urban short term facilities remained. These facilities were then subdivided into peer groups on the basis of licensed bed size. In the 1982 study, Dominican Santa Cruz and Community Hospital of Santa Cruz were placed in the 'moderately-sized' urban category, while Watsonville was placed in the 'small-urban' hospital peer group. In the 1991 study, Dominican Santa Cruz was placed in the 'medium-sized urban' hospital peer group, which consisted of all hospitals not elsewhere classified with between 170 and 270 licensed beds. Watsonville was placed in the 'moderately small- sized' urban hospital peer group, which consisted of all hospitals not elsewhere classified with between 95 and 170 licensed beds.

We used the following procedure to establish a control group for the current study. First, to ensure that peer hospitals were located in markets as similar as possible to the Santa Cruz market, hospitals located in counties that were part of very large Primary Metropolitan Statistical Areas (PMSAs) were eliminated. This eliminated hospitals located in the following counties: Los Angeles, Orange, Ventura, Riverside, San Bernardino, San Diego, San Francisco, Alameda, Contra Costa, Marin,

[26] Several of the control variables (income, popdensity, unemploy, hmo and wage) vary only on an annual, not quarterly, basis.

San Mateo and Santa Clara. The competitive environment in such large urbanized areas likely is very different from that found in the less urbanized area of Santa Cruz.

Next, the peer group was restricted to those hospitals that were placed in any of the short term urban hospital peer groups in the 1991 California study, and were licensed with between 100 and 300 beds in that year. While somewhat arbitrary, these licensed bed cut-offs would appear to limit the sample to hospitals reasonably comparable to the hospitals in Santa Cruz. This left 41 potential peer group hospitals. We next eliminated those hospitals in this group that were not in the same bedsize category, and/or that did not fall under one of the urban hospital groupings in the 1982 California Peer Group survey. This left 33 potential peer group hospitals. Eight more hospitals were eliminated because (according to the 1996 *AHA Guide*) they did not fall into the appropriate bedsize category. We then eliminated all hospitals that had themselves been involved in a horizontal acquisition as reported in the OSHPD Hospital History Listing database, or were located in a county where a horizontal merger had occurred during the sample period. This group of 16 remaining hospitals constitutes our peer group (*see* Appendix A).

Column (c) of Tables III and IV presents estimates of the reduced form price regressions incorporating the peer group controls. In these equations the dependent and explanatory variables have been redefined as the difference between the own- and peer group value (e.g., in the Dominican equation, the dependent variable equals the Dominican price minus the (mean) peer group price). The results from this specification continue to suggest a fairly large price effect from the transaction ($1,005/admission in the case of Dominican; $672/admission in the case of Watsonville). These estimates are statistically significant at the $p = 0.06$ and $p = 0.10$ levels, respectively.

Many of the other coefficients in this equation have the expected sign, but are not always statistically significant. The coefficient on average length-of-stay (alos_d and alos_w) is positive in both equations, and significant at the $p = 0.02$ level. The medical equipment price index is positive in both equations, as expected, but significant at conventional levels only in the Watsonville equation. Similarly, the estimated parameter on the casemix index is positive and significant only in the Watsonville equation. The HMO share variable is negatively related to price in both equations, as one would expect, but is never significant.

We also observe an interesting pattern of results on the two event variables, quality and entry. In both equations, the coefficient on entry is large and positive; in the case of Dominican, we can reject the null of a zero coefficient at the $p = 0.04$ significance level. Obviously, this is somewhat counterintuitive; one possible explanation is that the entry of Sutter induced Dominican to increase its quality, leading to higher prices

and higher unit costs. This possibility receives some support from the expense regressions reported in column (d), which show that Dominican's expenses per admission increased by about $263 ($p = 0.08$) when Sutter entered the market. However, the results for the Watsonville equation do not support this hypothesis.

The pattern of coefficients on quake (positive in the Dominican price equation, negative in the Watsonville price equation) can be potentially rationalized as an exogenous quality reduction at Watsonville that allowed Dominican to raise its price. The quake coefficient is not significant in the Dominican equation, however, though it is in the Watsonville equation ($p = 0.06$).

V. ALTERNATIVE EXPLANATIONS FOR THE POST-MERGER PRICE INCREASE

While the empirical results presented in Tables III and IV suggest a post-merger price increase—with the evidence strongest in the case of the merged entity, Dominican—our inability to observe and measure quality perfectly means that we cannot rule out the possibility that the price increases reflect improvements in quality, rather than increased price-cost markups with unchanged (or even diminished) quality levels. The evidence on this possibility is mixed. We observe first that the parties to the acquisition made no such claims in defense of the transaction. If significant quality improvements resulted from the transaction, they were not foreseen by the parties at the time of transaction. Rather, the parties claimed that the efficiencies from the transaction would derive from the realization of scale-related production efficiencies.[27] To the extent that such scale economies were realized, we would expect prices to fall, other things held constant.

It is perhaps conceivable that consolidation of particular services at Dominican could lead to volume-related quality increases—for example, because clinical outcomes for some procedures improve as the procedure is performed with higher frequency at a particular location.[28] Then, Dominican might be able to capture some or all of the value of this quality increase in the form of higher prices.

The problem with this explanation is that it fails to explain the post-merger increase in price at Watsonville Hospital. If the elimination of Community Hospital as a provider of the services in question leads to higher (quality-unadjusted) prices at Dominican because of the efficiencies

[27] See Statement of Commissioner Yao. Dominican claimed that Community Hospital was inefficiently small, and that efficiencies could therefore be realized by converting it to a skilled nursing/rehabilitation facility, and channeling its patients to Dominican.

[28] For a large number of clinical procedures there is empirical evidence that outcomes improve with patient volume. See, e.g., Begg *et al.* [1998] and Selby *et al.* [1996].

described in the preceding paragraph, Watsonville would either have to (1) reduce its price (assuming that its quality remained unchanged); or (2) match Dominican's quality increase. If Watsonville captured some of the patient flow that otherwise would have patronized Community, then it too might be able to realize volume-related quality increases. But if this occurred, then it is unclear why prices would rise unless the transaction also had adverse competitive effects.[29] In a competitive market, prices are determined by cost, not demand (demand determines the equilibrium quantity, but price will be determined by marginal cost). If the quality of certain services increases at both hospitals (but costs remain unchanged), then there will be a market-wide increase in demand for the service, leading to an increase in the total quantity sold. But if marginal costs are constant, and prices are determined competitively, the price at which this service is sold would not change. If prices increase, it suggests that the transaction has increased market power, even if it simultaneously yielded efficiencies.

It perhaps is conceivable that the merger led to other types of quality increases at both Dominican and Watsonville that are not related to volume, but which manifest themselves in greater resource use per patient. If so, we might observe a post-merger increase in expenses per admission or expenses per day—hence prices—at both hospitals, other things held constant. We carry out two tests of this hypothesis. First, we construct dependent variables equal to the difference in per admission expenses between Dominican (Watsonville) and the peer group, and regress this difference against the same explanatory variables employed in the column (c) regressions. Column (d) of Tables III and IV reports the results of these regressions. The results of this test do not support the hypothesis of higher post-merger quality. In the Dominican equation, the coefficient on merge suggests only a small increase in per-admission expenses; we cannot reject the hypothesis that there was no post-merger increase in per-admission expenses. Similarly, in the Watsonville expense regressions we find only a small ($79) post-merger increase in per-admission expenses; as with Dominican, we cannot reject the hypothesis that the true coefficient on merge equals zero.

We conduct a second test of the efficiency hypothesis by examining data on patient flows. If the transaction improved the quality of hospital care provided in Santa Cruz County, relative to that provided in hospitals outside the county, we would expect to observe (*ceteris paribus*) an increase in the proportion of Santa Cruz County residents who seek hospital care within Santa Cruz county. To test the efficiency hypothesis,

[29] The other possibility is that marginal cost increases with output. This possibility is difficult to reconcile with the efficiency claims actually put forth by the parties; i.e., that the merger allowed the merged entity to enjoy scale-related reductions in unit cost.

1. Hospitals purport that Oklahoma hospitals went out of business due to lack of protection from CON. What are the real reasons that they went out of business, what was the time frame, and what true impact did CON reform have on this situation (if any)?

Numerous academic and government sponsored studies have indicated that there are many factors that account for hospital closures. A 1989 Executive Summary by the U.S. Inspector General of Health and Human Services examined hospital closings on a national basis found there was no single reason for hospital closures but rather a number of conditions which gradually weakened the financial condition of the hospital.[1] Rather, the study found underlying commonalties in closed hospitals included: (1) declining revenue due to fewer admissions, lower third party reimbursement, more uncompensated care, and (2) rising costs due to increasing demand for new technology, skilled personnel, and facility maintenance, renovation, or replacement.[2]

According to a study at Northwestern University by Dr. R.C. Lindrooth, Ph.D, urban hospitals go out of business when there is a surplus of beds in the area or when they treat a large percentage of Medicaid patients, which may lead to uncompensated care.[3] They also tend to be inefficient, and when they close, the overall efficiency of the market increases. Rural hospitals go out of business when they are less diversified. Successful hospitals provide a large proportion of outpatient visits and surgeries while using the newest technology. The Lindrooth study also found that hospital mergers that result in the closing of one facility have more cost savings than other types of mergers. The study concludes that in markets with low occupancy rates and where patient access to care is not a problem; hospitals should be allowed to close.[4]

A 2000 report by the U.S. Office of Inspector General within Health and Human Services of 1998 U.S. hospital closings found similar reasons as outlined above. For both rural and urban hospitals, occupancy rates were lower than the national average, Medicare utilization was lower than the national average, and Medicaid utilization was higher. Closed hospitals also cited outdated equipment as a contributing factor to their demise.[5]

Some hospitals within Oklahoma expected to be (and subsequently have been) forced into closure due to a negative cash-flow as a result of rising liability and malpractice insurance rates.[6] Rural Oklahoma is faced with a unique set of issues which may have led to hospital closures. Many physicians in Oklahoma are located within the major cities partially due, in part, to city

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[1] "Hospital Closure: 1987" Richard P. Kusserow, Inspector General, U.S. Department of Health and Human Services, May 1989, p. 7.

[22] "Hospital Closure: 1987" Richard P. Kusserow, Inspector General, U.S. Department of Health and Human Services, May 1989, p. i-ii.

[3] "Cause and Effect of Hospital Distress and Closure," Richard C. Lindrooth, Northwestern University, AHRG Grant HS10730.

[4] "Cause and Effect of Hospital Distress and Closure," Richard C. Lindrooth, Northwestern University. AHRG Grant HS10730.

[5] "Hospital Closures: 1998," Office of Inspector General, July 2000, p. 2-9.

[6] Edmond Lawmaker: Hospital Closing Reflects Need for Lawsuit Reform," available at http://www.lsb.state.ok.us/HOUSE/news7705.html.

hospitals which purchase rural practices.[7] As an adequate supply of physicians are vital to the operation of a hospital, some rural Oklahoma hospitals have faced closure due to the shortage pf physician manpower.[8]

What studies have shown that it is especially important for rural areas to have a viable health sector to promote growth in existing markets and to entice new businesses to the area?[9] Additionally, a 2003 study of Atoka County, Oklahoma determined that the hospital is usually the largest employer of non-farm workers, as demonstrated.[10] The health sector employed ten percent (10%) of the non-farm workforce, and when adjusted for the number of new jobs this employment created, the impact was approximately twenty percent (20%).[11] When the health care delivery system (hospitals) fails, the overall economy suffers. It is therefore important to allow competition among hospitals, which might result in the closing of poorer performing hospitals, thereby allowing successful ones to thrive and maintain the local economy.

A 2002 study by Project Hope of the Center for Health Affairs reported (Streisand et al.) no dramatic ill economic effects of rural hospital closings in Appalachia.[12] Recognizing the inconsistency with other study findings, they saw population and employment growth similar to the average in other Appalachia areas among communities whose hospital had closed, although employment did decline over the long-term in these communities. They reported that eight (8) out of ten (10) communities whose only hospital had closed between 1986 and 1996, had more jobs four (4) years after closure than two (2) years prior. However, hospitals only accounted for about one percent (1%) of total employment in the counties studied. Reasons for hospital closings included being a smaller hospital with less money or having nearby competitors. Closings, though, allowed money to be reallocated for improvement of long-term care services and ambulance services (See attached exhibit 1).[13]

The reasons for the Oklahoma hospitals closing include consolidation and all factors above. There is no statistically valid evidence on record to support a condition of causation between the repeal of Certificate of Need in Oklahoma to a reasonable certainty as the proximate cause of market competition resulting from the relaxation of Certificate of Need regulation related to hospital development in Oklahoma.

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[7] "Commission Puts Physicians in Rural Areas," Manny Gamallo, Tulsa World, May 13, 1996, p. A9.
[8] "Commission Puts Physicians in Rural Areas," Manny Gamallo, Tulsa World, May 13, 1996, p. A9.
[9] "Economic importance of Health-care Sector in Rural Economy," G.A. Doeksen and V. Schott, International Electronic Journal of Rural and Remote Health Research, Education, Practice and Policy, Vol. 3 (online), (June 10, 2003), pp. 1-6.
[10] "Economic importance of Health-care Sector in Rural Economy," G.A. Doeksen and V. Schott, International Electronic Journal of Rural and Remote Health Research, Education, Practice and Policy, Vol. 3 (online), (June 10, 2003), pp. 1-6.
[11] "Economic importance of Health-care Sector in Rural Economy," G.A. Doeksen and V. Schott, International Electronic Journal of Rural and Remote Health Research, Education, Practice and Policy, Vol. 3 (online), (June 10, 2003), pp. 1-6.
[12] "An Analysis of the Financial Conditions of Health Care Institutions in the Appalachian Region and their Economic Impacts," Jeffrey Stensland, Curt Mueller, Janet Sutton, Project HOPE, Center for Health Affairs, December 2002, pp. i-66.
[13] "An Analysis of the Financial Conditions of Health Care Institutions in the Appalachian Region and their Economic Impacts," Jeffrey Stensland, Curt Mueller, Janet Sutton, Project HOPE, Center for Health Affairs, December 2002, pp. i-66.

2. Are there data from states/agencies on the cost and benefit ratios from repealing CON? How much money, if any, would be saved by repealing CON?

Several academic studies have investigated the costs and benefits of Certificates of Need. The Alabama Policy Institute's research examined two studies.[14]. The first study by Duke University Professors Christopher Conover and Frank Sloan showed "no decrease in per capita healthcare spending attributable to CON."[15] The other, older study "found that CON was responsible for a 13.6 percent increase in per capita spending on personal healthcare services."[16] The Alabama Policy Institute also examined a wide variety of studies done by the U. S. Federal Trade Commission and reiterated their conclusion that "there is considerable evidence that [CON programs] can actually drive up prices...".[17]

A report about healthcare in Maine found that "regulatory activities (e.g., government protocols related to licensure, Certificate of Need), were noted by payers as well as providers as contributing to higher costs."[18] The report by the Department of Justice and the Federal Trade Commission (quoted in the Alabama Policy Institute study) elaborates its claim that CON program drive up prices by stating that CON creates barriers to entry.[19]

3. Summary of CON pros/cons.
CON RESEARCH CONSENSUS

The beneficial aspects of market competition in healthcare are significantly obstructed from controlling costs, providing patient access and choice, and improving quality, by a number of systemic barriers including the continued imposition of CON laws. These barriers to competition limit the types of innovation and technological advancements that create inefficiencies in other industries, ultimately resulting in higher costs and lower quality care. Specific aspects of the challenges related to CON are examined below in greater detail.

a. Theoretical Rationale for Eliminating CON

CON regulations, by reducing competition and consumer choice, inhibit market mechanisms that are vital components of the current healthcare system. Furthermore, a review of the literature clearly establishes that CON regulations have not achieved the forecasted reduction of overall healthcare costs, nor have they improved the quality of healthcare.

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[14] "Certificate of Need Laws: Why It's Time for Repeal" by Dr. Roy Cordato, 2007, p.16-17.
[15] "Certificate of Need Laws: Why It's Time for Repeal" by Dr. Roy Cordato, 2007, p. 17.
[16] "Certificate of Need Laws: Why It's Time for Repeal" by Dr. Roy Cordato, 2007, p. 17.
[17] "Certificate of Need Laws: Why It's Time for Repeal" by Dr. Roy Cordato, 2007, p. 17.
[18] "The Cost of Health Care in Maine" by the Year 2000 Blue Ribbon Commission on Health Care., November, 2000, p. 23.
[19] "Improving Health Care: A Dose of Competition" by the Federal Trade Commission and the Department of Justice, July 2004, ch. 8, pg. 4.

i. The Certificate of Need Paradox

CON proponents claim that this regulatory mechanism is able to "do a lot with a little". This claim is based on CON's simplistic and low budget review of capital expenditures of those entities applying under the CON process and a comparison of existing and forecasted population, utilization, and occupancy rates based upon arbitrary, capricious, and unfounded comparative criteria that do not at all consider "down-stream costs", patient access, beneficial outcomes, or quality of care. CON laws seek to limit capital expenditures based on the flawed, unsupported, and refuted assumption that limiting infrastructure investment achieves lower overall healthcare costs. CON has been implemented as a clumsy, heavy-handed, "meat-ax" attempt by legislators to control the costs of healthcare by reducing duplication of services, without first determining what constitutes "duplication" or whether duplication raises costs. Many hospitals and other healthcare service providers encourage CON laws because they perpetuate a more predicable competitive environment by limiting competition in favor of the established oligopoly provider. The motives underlying the continued support for CON laws have pronounced implications for public policy, and invite a detailed investigation of the goals, processes, and requirements inherent in CON laws. By deconstructing the CON concept, the paradoxes of its development and continued implementation become apparent.

ii. Market Failure

1. Justification for Governmental Intervention

An essential element in attempting to justify government intervention in the economic, competitive mechanisms of the private market is the claimed need for correction of perceived market failures. Regardless of the prior state of healthcare markets, CON reduces competition and thereby creates or exacerbates market failures, by adding further barriers to market entry for innovative new market entrant competitors. In essence, government regulation thwarts innovation, and, lacking innovation, both U.S. healthcare costs, efficiencies, and quality will not improve. CON serves as a hidden tax, unauthorized by or disclosed to the public, which is falsely justified by unsupported claims by hospitals to avoid competitors so they can maintain higher prices for some services in pursuit of promised cross-subsidization of other services.

iii. Managed Care Cost Controls

Free markets allow purchasers of healthcare services to negotiate for lower costs in the face of the strength and leverage of established, large health system providers. CON laws shelter these established, large healthcare providers from the demands and needs of purchasers and payors regarding cost, quality, access, and patient choice. These desirable aspects of the healthcare market mechanisms may, however, be substantially thwarted by hospital oligopolies under color of CON laws.[20]

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[20] Patrick John McGinley, Beyond Health Care Reform: Reconsidering Certificate Of Need Laws In A "Managed Competition" System. 23 Fla. St U.L. Rev. at 141, 168.

Integrated Delivery Systems

CON regulations promote the construction of vertically integrated systems, by disfavoring horizontal consolidation.[21] "Attempts by providers to reduce costs, gain efficiencies of size, and position themselves aggressively in the marketplace have resulted in the formation of integrated delivery systems of such providers. However, the CON laws still in existence in 37 states and the District of Columbia actually increase the costs of forming these associations, while at the same time slowing the rate at which the providers are able to react appropriately to changing market circumstances."[22] However, at the same time, CON adds unnecessary costs to the development of these systems. To the extent that horizontal consolidation may allow, in a given market and / or geographic circumstance, for achieving the significant benefits of cost, quality, access, and patient choice, then CON defeats its own stated desired outcome and purpose.

b. Impracticality of CON Legislation

Even, in the hypothetical, it were to be determined that CON regulations were able to control healthcare costs, major revisions would be necessary in order for them to be an effective and valid tool for this type of drastic government intervention into the complex competitive mechanisms of the healthcare market. The process would need to provide a more sophisticated, science-based methodology with objective analysis of valid and pertinent empirical data that reasonably considers the appropriate wider range of public health factors that are considered within the context of a larger public health vision. A comprehensive health planning policy, setting forth and based upon a consensus related to desired objectives is needed in order for any successful design or implementation of CON regulations. Lacking that, CON acts as the subjective enforcer of selective oligopoly interests – the "rule-of-men" not the "rule-of-law".

Eliminates Patient Choice

There is ample evidence in the economic and business literature that, in a market economy, competition can create choices for consumers and raises quality standards as providers compete for patient loyalty. By eliminating competition, whether through the acquisition of physician practices or by utilizing CON to block new, competitive providers, and hospitals undermine the primary system of checks and balances in healthcare – patient choice. When patient choice is constrained or vanishes, control shifts from patients to committees of business executives, hospital administrators, and private organizations that loudly claim to have community health as their primary interest while, at the same time, often demonstrating a contempt for the competition that provides the fundamental aspects and incentives of patient access and choice to allow the public health objectives to be achieved.

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[21] McKinlay, J. B. and Stoeckle, J. D. (1988). Corporatization and the social transformation of doctoring. International Journal of Health Services 18, 191-205.

[22] Braulino Montesino, Anatomy of a Roadblock, Health Systems Review at 30 (1996).

When patient choice is diminished, decisions about access, quality, and beneficial outcomes become the sole purview of these elite groups. In the absence of healthy competition, they are free to ignore patient needs and demands.

Under CON laws, patients are *de facto* limited to accept the services that existing providers wish to offer them when making major healthcare decisions for themselves and their families because their community may be determined to lack a sufficient utilization ratio to allow alternative market entrants. Without ample consideration of access to healthcare services, a patient's right to choose for himself and his family, the methodology utilized by CON laws does not meet the needs of the healthcare community or reflect the interest of the public. Instead CON serves to promote the oligopoly interests of existing, established provider organizations who find competition inconvenient.

Closely correlated to CON laws' dangerous denial of access and patient choice is the barrier to entry posed by these rules. New medical provider entrants, no matter how efficiently and creatively they might contribute to higher healthcare quality, more beneficial patient outcomes, greater patient access and convenience, and lower ***overall*** healthcare costs, face substantial opposition by these established interests, who would utilize CON laws to actively strive to limit competition and thereby deny patient choice.

Overall Healthcare Costs Not Considered

Current CON regulations do not consider the overall costs or the totality of healthcare costs for the state. By focusing on the capital costs, the operational costs are overlooked. Capital investment may, in fact, reduce the overall costs of healthcare provision.

No consideration was given to a comparison of an overall cost of the continued utilization of older technology to the investment in newer technology. For example, a certain piece of medical equipment may be deemed cost-appropriate simply because it falls slightly below the expenditure threshold. At the same time, a different piece of equipment with improved technology which significantly enhances the quality of care; provides a lower operating cost per procedure; and prevents further exacerbation of the patient's medical condition, thereby saving enormous downstream patient treatment costs, is not considered cost-appropriate because the initial investment to attain it is slightly over the application of the artificial, arbitrary and capricious expenditure threshold promulgated by CON laws. In this manner, these laws irrationally defy any semblance of rational economic administration of public health and safety, while at the same time doing absolutely nothing to lower the overall costs of healthcare.

Prevention, Wellness, and Other New Cost Containment Mechanisms

CON regulations are being replaced by new, more effective cost containment strategies such as Medicare's Prospective Payment Systems (PPS), wellness/prevention programs and education, and, in theory, the growth of managed care. The re-evaluation of CON laws leads to the question, "does removing certificate-of-need regulations lead to a surge in health care

spending?"[23] In December 1996, Pennsylvania's CON program expired due to an unexpected legislative oversight. Although many people feared that this would cause serious problems for healthcare providers in the state, they did not materialize according to local regulators and providers. Market forces and local planning apparently took over.[24] New Jersey has also been cited as a state which did not experience a significant increase in health facilities after relaxing CON standards.[25] Ohio, however, saw growth in the number of non-hospital facilities, particularly ASCs, after eliminating CON.[26]

c. Lack of Data and Inappropriate Methodology

i. Insufficient Data

Policy makers often do not have sufficient relevant or accurate data to guide CON decisions.

ii. Reliability of CON Application Data

Kottle v. Northwest Kidney Centers is a case where information to the CON board was falsified in order to have a new dialysis center turned down. The information helped to stifle competition and allow the current operator to maintain a monopoly although there was a clear need for the facility.[27]

iii. CON Methodology Doesn't Consider All Variables

Often the methodologies employed do not include demographic analyses, epidemiological analyses, market analyses, and forecasting analyses that account for all the relevant co-variables involved. Instead, variables that are dependent are often considered independent for analytical purposes. Utilization for one type of medical equipment often varies depending upon the utilization of other medical equipment devices.

For example, CT scanning equipment and PET scanners are both expensive enough to require CON approval in most states with CON laws. For many types of conditions these different imaging tools are used for the same diagnostic purposes. Therefore greater PET utilization may lower the utilization of CT or MRI and vice versa.

iii. Utilization Measures Don't Consider Population Variations

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[23] Christopher Conover and Frank Sloan, Does removing certificate-of-need regulations lead to a surge in health care spending?, Journal of Health Politics, Policy and Law, Vol. 23 Issue 3 at 455.

[24] "Pennsylvania: Unplanned demise of CON program has not caused upheaval in industry." BNA's Health Law Reporter, Vol. 6, no. 33 (Aug. 14, 1997).

[25] "Opportunity at 'Sunset': Missouri relaxes its certificate of need requirements for ambulatory surgery centers" Missouri Medicine, Vol. 99, no. 2 (Feb. 2002), p. 71.

[26] "Opportunity at 'Sunset': Missouri relaxes its certificate of need requirements for ambulatory surgery centers" Missouri Medicine, Vol. 99, no. 2 (Feb. 2002), p. 71.

[27] Young M. Park, Antitrust: Monopoly of Kidney Dialysis Service—Kottle v. Northwest Kidney Centers, 24 Am. J. L. and Med. at 503, 504 (1998).

Utilization methods do not account for disease incidence across populations nor do they account for the variation of population subgroups. These spatial patterns of disease are often not included in CON utilization thresholds or units per population "need" methodologies. A wider vision is needed in order to make CON regulations work.

I FINAL THOUGHTS

If the market is not effective in controlling healthcare costs then other means may need to be employed. These may range from socialized national healthcare, as is widely found in Europe and other industrialized nations, to a completely fee-for-service system. On the other hand, managed care was touted by the government as the answer to healthcare cost inflation beginning with the HMO Act of 1973.[28] The term *health maintenance organization* was first coined during this period, referring to a prepaid organization that provided healthcare to voluntarily enrolled members in return for a preset amount of money on a PMPM basis. The HMO Act provided grants and loans for new HMOs and aided the expansion of existing HMOs.[29] It also required employers (with at least 25 employees) to offer two federally qualified HMO plans to their existing healthcare coverage mix.[30]

Managed care did temporarily slow the growth of health insurance premiums. However, controlling costs by limiting utilization, as CON laws also do, has not stopped cost inflation and has lowered healthcare quality. In order to best balance quality and cost, utilization must be controlled to prevent unnecessary care and reimbursement must be structured to provide incentive to providers and facilities to provide adequate level of care including preventative treatments.

I.A Methodology Suggestions

I.A.1 Local Market Utilization Analysis

Any utilization analysis must also consider the context of the neighborhoods serviced by healthcare facilities and equipment. Service area demographic analysis must be considered in order to provide meaning to utilization data. Markets are unique and require different standards dependent on population characteristics. Population projections and demographic analysis of characteristics would enhance the use of utilization data.

I.A.2 The Influence of Market Power

Any appropriate methodology would also investigate market power. Market share can be used to measure the potential monopolistic tendencies of hospitals in a given service area.[31] Healthy

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[28] The Managed Health Care Handbook, 3rd edition, Aspen Publishers, 1996, p. 6.
[29] The Managed Health Care Handbook, 3rd edition, Aspen Publishers, 1996, p. 6.
[30] The Managed Health Care Handbook, 3rd edition, Aspen Publishers, 1996, p. 6.
[31] Greenberg, W. (Dec. 1998). Marshfield Clinic, Physician Networks, and the Exercise of Monopoly Power. Health Services Research 33(5) 1461-1476

competition gives economic power to patients. In 1990, hospitals in more competitive markets had average costs below those of less competitive markets.[32]

I.A.3 Consideration of Unit Costs

Per capita costs, per day costs, per admissions, and per procedure cost should be used as a more accurate measure of total hospital utilization costs.[33] Cost per Relative Value Unit (RVU) may also provide a more accurate representation of costs.

I.A.4 Costs of Empty Hospital Beds

The costs of empty hospital beds should be linked to the market environment in which the hospital operates.[34] By doing so, variations in cost can be accounted for without resorting to uniform standards that may be inequitable in certain service areas.

I.A.5 Fluctuations in Hospital Occupancy Rates

Simple uses of target occupancy levels are not sufficient in utilization analysis. Any analysis must include aspects of fluctuation in hospital bed utilization over the long term and short term to account for emergency demand.[35]

I.B Data Recommendations

I.B.1 Population and Demographics Data

Population and demographics data utilized in CON analyses also needs careful scrutiny. For example, U.S. Census data for specific census tracts will vary from data at the block group level, which data is often taken from samples and is therefore less reliable. The specific Census geopolitical designated regions for which data is available may not appropriately match the provider catchment or patient service area for which need is being determined.

I.C Alternate Approaches for Governmental Influence on Healthcare Costs

Free market competition independently establishes need for new health facilities, equipment, and services. In an unregulated market, investors in new healthcare infrastructure must conduct their own market research into the local demand for and availability of the proposed health service;

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[32] Zwanziger J, Melnick G, Bamezai A. "California providers adjust to increasing price controls." In *Health Policy Reform: Competition and Controls*. Edited by R. Helms, pp. 241-58. Washington, DC: AEI Press, 1993.

[33] Antel, J. J., Ohsfeldt, R. L. and Becker, E. R. (Aug. 1995). State Regulation and Hospital Costs. The Review of Economics and Statistics 77(3) 416-422

[34] Magnussen, J. and Mobley, L. R. (Nov. 1999). The Impact of Market Environment on Excess Capacity and the Cost of an Empty Hospital Bed. International Journal of the Economics of Business 6(3) 383

[35] Green, L. V. and Nguyen, G. V. (June, 2001). Strategies for Cutting Hospital Beds: The Impact on Patient Service. Health Services Research 36(2) 421

the sources or payment and their sufficiency for local patients and payors; the existence and capacity of competing and substitute providers and services; as well as, all of the other competitive factors influencing the viability of a new health service business investment.

Competition compels providers to control costs and provide quality service. This competitive system is the basis for cost control in the U.S. economy. CON is an artificial, government imposed barrier to competition rarely seen in the U.S. or outside of the healthcare industry. To switch to a regulated system of cost control in healthcare would require an enormous level of control and coordination far beyond the current small scope of the information gathering and analysis capacity of existing CON programs. Such an effort to switch to a regulated market would be one to which Americans have historically appeared to oppose.

Michael Porter (et al.) wrote in the Harvard Business Review that,

> *"In industry after industry, the underlying dynamic is the same: competition compels companies to deliver increasing value to customers. The fundamental driver of this continuous quality improvement and cost reduction is innovation. Without incentives to sustain innovation in health care, short-term cost savings will soon be overwhelmed by the desire to widen access, the growing health needs of an aging population, and the unwillingness of Americans to settle for anything less than the best treatments available. Inevitably, the failure to promote innovation will lead to lower quality or more rationing of care – two equally undesirable results."*[36]

If the healthcare industry is to achieve a reduction in cost in response to market pressures, then the healthcare market must first create incentives for innovation. The barriers to competition cannot include barriers to innovation as many do now. Healthcare purchasers, managers, and legislators must ensure innovation takes the forefront of any reform, if it is to be effective.

If we are to achieve **value** in healthcare delivery there must be concern about how innovation and competition can achieve the really important considerations - access, quality, beneficial outcomes, appropriate cost and patient choice. The continued imposition of Certificate of Need regulatory policy serves as an impediment for each of these objectives, and acts instead to serve only the desire of oligopoly health systems to avoid the inconvenience of market competition.

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[36] "Making competition in health care work." By Michael Porter, et al. Harvard Business Review, July/Aug. 1994, p. 131.

on behalf of the
Missouri Health Facilities Review Committee

Thomas R. Piper

Director, Missouri Certificate of Need Program

a presentation to the
Alaska Senate
Health, Education & Social Services Committee
by conference call
Juneau, Alaska
1:30 pm, Friday, February 8, 2008

Topics

CON Today
FTC Testimony
CON Concepts and Issues

Certificate of Need: Protecting Public Interests

Free Market and Competition
Business Health Studies
CON Rationale

Benefits