

## Mgmt 444

### Competition, Integration and Antitrust

We will explore three fundamental questions:

- How does competition in health care work?
- Does integration lead to efficiency?
- What is the role of antitrust law?

#### Competition in Health Care

Let's begin by examining the evolution of *price competition*. We will then move on to competition on nonprice dimensions (e.g., quality)

We will use the Five Forces Internal Rivalry framework

Baseline for analysis: Provider competition in the era of Marcus Welby medicine ("patient-driven competition")

- There were many competitors, at least in urban areas – one ingredient that favored competition
- Patients were loyal to their PCPs
- PCPs had narrow referral and hospital networks that were not selected on the basis of price
- Insured patients did not shop on the basis of price and factors other than price were extremely influential
- Physician organizations occasionally published fee schedules (until antitrust laws intervened); Hospitals got cost-based reimbursement
- Nonprofit hospitals did not aggressively seek growth; MDs did not aggressively seek growth
- Most hospitals were at or near their "designed" capacity

Overall, providers had little reason to use price as a competitive weapon

- Some wondered why providers did not charge infinitely high prices!
- Key empirical finding: There was no observed relationship between market structure and prices. If anything, *prices seemed to be higher in more competitive markets*

Of course, competition in the U.S. is no longer patient-driven; price-competition is ever present

- Third party payers use financial incentives to steer enrollees to preferred providers in exchange for discounts
- Illustrate by describing one of the first PPOs --ADMAR
- Additional examples from PBM
  - . Assembling a retail drugstore network
  - . Securing discounts from drug makers
- Selective contracting grew slowly at first, in part due to state regulation of insurance
- Today, selective contracting is widespread for hospitals, physicians, drugs, and retail pharmacy.
- Several states now have "any willing provider" statutes that limit selective contracting, especially for pharmacy

Payer-driven competition fundamentally alters price competition

- Payers are motivated to shop around
- Payers may be better informed about prices
- Payers will show less loyalty -- treating sellers as homogeneous

Evidence shows that selectively contracting providers get better rates

- Magnitudes of the discounts may vary, depending both on the pre-discount margins and the extent of price sensitivity
- Hospitals may discount by 50% or more; Physicians by 25%; Rx makers by as much as 80%; retail pharmacy by 25%

Moreover, pricing patterns accord with expectations

- Lower prices when market has more sellers
- Lower prices when there is excess capacity

Selective contracting fundamentally changed internal rivalry, but recent events have swung the pendulum back again

- There has been substantial provider consolidation (more later)
- Capacity has been withdrawn from the market
- Consumers have rebelled against small, tightly managed networks
  - . Networks have expanded; in large markets, 90% of the biggest hospitals are in the typical network. Perhaps 60-80% of MDs participate (up from 75% and 50% respectively)
  - . As networks get bigger, providers negotiate better rates, as a simple supply curve reveals
- These trends have dramatically reduced internal rivalry
  - . Some characterize today's environment as *managed care lite*
  - . More costly than traditional managed care
  - . Contributing to double digit growth in health insurance premiums

We will say a lot more about price competition when we discuss antitrust.

## *Quality Competition: A Simple Model of Quality Choice*

Consider a single firm choosing price and quality. All else equal, the firm will sell more if it lowers price and raises quality. It is costly to raise quality, however, so the firm must decide on the optimal quality level.

Let  $P$  = price  
 $Q$  = quality  
 $X = X(P, Q)$  = demand  
 $X \cdot C(Q)$  = cost of producing  $X$  units at quality level  $Q$ , where it is assumed that  $\partial C / \partial Q > 0$  (it is costly to raise quality).

The firm chooses  $P$  and  $Q$  to maximize  $\Pi$ :

$$\max \Pi = P \cdot X(P, Q) - X(P, Q) \cdot C(Q)$$

Differentiating with respect to price and quality gives us necessary conditions for optimal  $P$  and  $Q$ :

Optimal  $P$  satisfies:  $P \cdot (\partial X / \partial P) + X = C \cdot (\partial X / \partial P)$

Optimal  $Q$  satisfies:  $P \cdot (\partial X / \partial Q) - C \cdot (\partial X / \partial Q) = X \cdot (\partial C / \partial Q)$

Both optimality conditions state "marginal revenue = marginal cost"

Rearranging the optimal  $Q$  condition gives a useful formula for optimal  $Q$ :

$$\text{Optimal } Q \text{ satisfies: } (P - C) \cdot (\partial X / \partial Q) = X \cdot (\partial C / \partial Q)$$

$$\text{Nominal markup} \cdot \text{Change in demand} = \text{Additional cost}$$

Let's examine the left hand side in greater detail

1)  $P - C$  = the nominal markup above costs for each patient.

- The higher is the markup, the higher is marginal profit from new business and the greater the incentive to invest in quality.

- The intuition is as follows. Improvements in quality are associated with increases in demand. A firm will be more willing to spend money to increase demand if the added profit is higher.

There is good evidence that quality is linked to price-cost margins.

E.g., Langa and Sussman studied patients who had cardiac revascularization in California in 1980s

- Costly procedure that at the time was thought of as the higher quality intervention
- California cuts Medicaid payments in 1980s; would this have an impact on revascularization rates and patient outcomes?
- They document both reduced services and poorer outcomes for Medicaid cardiac revascularization patients following Medicaid payment reductions (*see handout*)

Shen examines hospital quality for AMI patients, as measured by mortality rates and complication rates

- He develops two measures of “financial pressure”: HMO penetration and level of Medicare PPS payments
- The key findings confirm the theory
  - . Decreased Medicare generosity is associated with higher mortality
  - . Increased HMO penetration is associated with higher mortality
  - . The HMO effects disappear if one goes out 1-2 years (The Medicare effects are still present, though smaller)

2)  $\partial X/\partial Q$  = the responsiveness of demand to quality.

- Increasing quality is more profitable when consumers are highly responsive to the increase
- Quality is multidimensional
  - . E.g., Amenities versus technical quality
  - . Which do patients respond to?
  - . This is a fundamental question for the report card movement

3)  $X \cdot (\partial C / \partial Q)$

- The right hand side of the optimal Q equation is marginal cost
- Not surprisingly, quality is limited by cost

What does this model imply for quality competition?

- An increase in quality competition may be thought of as an increase in consumer (patient and MD) sensitivity to quality
  - . This could be brought about by greater consumer choice or greater consumer information
  - . Increase in sensitivity causes providers to aggressively compete on non-price dimensions
  - . This is good for consumers in the sense that they get more of the things they demand
- There is a potentially unwelcome “side effect” – competition can drive up costs

This combination of factors precipitated the so-called "medical arms race" (MAR) of the 1960s and 1970s (some claim that it is ongoing)

- Hospitals compete for patients (and their docs) by offering the latest in equipment and the most generous staffing
  - . Much anecdotal evidence (Enthoven, Kalamazoo)
  - . Seminal research study performed by Robinson and Luft

Q: What is the empirical framework in Robinson and Luft's study?

Q: What are their key results?

Q: Is the MAR a bad thing?

The shift to payer-driven competition ended the MAR

- P-C fell in competitive markets, offsetting incentives to boost quality
  - . Studies in 1990s no longer found any relationship between cost and concentration in markets dominated by managed care
- As competition weakens, talk of the MAR has returned
  - . Hospitals still use technology to attract patients
  - . Cost/concentration link still ambiguous
- Competition based solely on amenities is a thing of the past

### **Competition among Payers**

Let's again use the Five Forces framework

- There appear to be two distinct geographic markets
  - . National employers want insurers with national presence
  - . Local employers seem to prefer local insurers who can better customize their products, but also buy from national insurers
- There are several national insurers, and the recent Wellpoint/Anthem merger adds to the number
- But competition among insurers is local
  - . Why?
  - . How local? State? Metro area?
- The AMA report (web link) reports concentration in metropolitan areas
  - . Most large markets in U.S. are reasonably competitive
  - . Smaller markets (and few large ones such as Philadelphia) are dominated (50-90% market shares) by one or two carriers

- Amongst the competitors, there may be some differentiation that limits competition even further
  - . HMOs are somewhat differentiated from PPOs
  - . National plans are differentiated from local plans, offering uniform coverage that national employers prefer
- Consumers (employers and employees) are very price sensitive – estimated own-elasticities of demand range from 3 to 5 or even higher
- Secret price negotiations (with employers) and large contracts lead to intense bidding wars in the large group market
- The threat of entry is unclear
  - . Customers are not brand loyal and there are few capital costs
  - . Building the information systems to manage provider networks can be costly
  - . Incumbents also enjoy the benefits of purchasing power
  - . There has been little major *de novo* entry into insurance markets of late

Evidence on plan profitability is mixed

- During late 1990s, health insurers suffered heavy losses.
  - . This may have been the result of aggressive efforts by HMOs to build market share (hoping to prosper from scale and loyalty)
- Industry is very healthy today
  - . Partly making up for losses
  - . Partly due to investment income
  - . May reflect industry concentration

Both providers and insurance consolidation can help limit internal rivalry.  
But is this the only motive for consolidation?

## **Horizontal and Vertical Integration**

First wave of integration in U.S. was a response to 1970s regulations

- New rules for CON, PSRO's and pricing regulations were burdensome for many smaller hospitals
- Upstart for-profit companies assembled hospital "systems"
  - . Many of the acquires were owned by MDs
  - . Acquirers, including Humana, HCA (now Columbia) and other national systems brought administrative expertise
- The strategy had limited growth potential
  - . Larger NFPs hired skilled managers
  - . Many hospitals hired contract management firms
- By mid-1980s, national for-profit chains controlled nearly 10 percent of all hospitals (and a somewhat smaller percentage of beds)
- Divestiture followed in early 1990s
  - . Exact causes not known
  - . Did systems overexpand?
  - . A new wave of mergers was soon to follow

Second merger wave was a response to managed care growth in the 1990s

- All elements of the U.S. healthcare system sought to consolidate
- Table on next page shows the extent of consolidation

### Exhibit 5.12: Health Care Mergers and Acquisitions, 1994-2003

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>SERVICES</b>												
Behavioral Health	27	<b>47</b>	<b>35</b>	<b>61</b>	<b>53</b>	<b>46</b>	33	17	13	11	20	24
Home Health Care	58	<b>76</b>	<b>136</b>	<b>137</b>	<b>83</b>	<b>63</b>	32	28	37	25	29	72
Hospitals	92	<b>128</b>	<b>163</b>	<b>197</b>	<b>137</b>	<b>109</b>	84	83	56	38	59	53
Laboratories: MRI, Dialysis	56	<b>60</b>	<b>91</b>	<b>113</b>	<b>94</b>	<b>55</b>	61	66	50	36	38	39
Long Term Care	26	<b>73</b>	<b>130</b>	<b>114</b>	<b>149</b>	<b>80</b>	47	53	71	98	86	128
Managed Care	39	<b>27</b>	<b>59</b>	<b>57</b>	<b>62</b>	<b>66</b>	46	30	33	28	37	30
Physician Medical Groups	90	<b>135</b>	<b>265</b>	<b>311</b>	<b>264</b>	<b>139</b>	70	39	36	24	36	34
Rehabilitation	50	<b>66</b>	<b>62</b>	<b>80</b>	<b>46</b>	<b>28</b>	11	16	16	18	10	9
Other	98	<b>62</b>	<b>150</b>	<b>214</b>	<b>256</b>	<b>148</b>	101	109	156	114	110	136
<b>TECHNOLOGY</b>												
Biotechnology	N/A						52	85	96	127	96	113
E-Health							71	86	59	53	49	60
Medical Devices							76	120	175	164	133	141
Pharmaceuticals							41	87	147	170	171	128

Source: Irving Levin and Associates

Note: the Levin data do not distinguish between horizontal and vertical combinations

One of the most significant trends of the 1990s was the formation of vertically *integrated delivery systems*

- Hospital system, primary care physician practices, diagnostic facilities, long term care, and possibly even insurance all under single organization umbrella
- System accepted capitated contracts covering a range of services

The IDS movement was perhaps the most significant strategic movement for U.S. providers in the 1990s

Burns and Pauly offer a revealing look at the IDS movement

- The managers they interviewed stated several rationales for IDS
  - . Manage global capitation
  - . Diversify risk
  - . Offer a continuum of care
  - . Protecting referrals
  - . Economies of scale and scope
- They observe that only a few of the stated objectives align with academic analyses of the benefits of VI
- Let's cast a critical eye on these rationales

Manage capitation

- The idea is to obtain a contract that pays a fixed fee to take care of all the patient's needs (through something called a PHO)
  - . This was a common scheme in the late 1990s
  - . Typically, the hospital or PHO was paid about 78-80% of premiums, and were responsible for all health care spending
  - . MCO retained 20-22% to cover marketing and other expenses
- Q: What are the strengths and weaknesses of this idea?

Diversifying risk

- Q: What is the case for and against?

Offering a continuum of care

- Defer for now

Protect/increase referrals

- Because MCO networks tend to be broad, physicians continue to control flow of patients to hospitals
- Hospitals bought MD practices so as to increase referrals
- Q: What are the potential problems with this idea?

Economies of scale and scope

- Q: What might these be in a vertical merger?

Let's use the make or buy framework from *Economics of Strategy* to discuss the academic approach to vertical integration in health care

Rationales for VI:

1) Solve coordination problems

- Many aspects of production may require a precise "fit"
  - . Could be a *timing fit*, as in a disease management protocol
  - . Could be a *technical fit*, such as the need for different medical information systems to share information
- Most critical dimensions of fit are called *design attributes*

- In principle, different actors can achieve fit through arms-length transactions – communication, contracts, etc.

- . Independent home nursing agency can agree to have staff on hand to handle discharges on an “as needed” basis
- . Hospital and its medical staff could agree to use the same electronic medical records software

- Individuals do not always live up to their end of the bargain, either by accident or intentionally

- . Home nursing agency may be short staffed or have a more urgent need elsewhere
- . Doctors may buy a different, incompatible product due to pricing
- . Contracts can only go so far to assure a proper fit
- . Opportunistic behavior (doing what is best for oneself; ignoring the greater good) cannot be prevented by contract

- Organization theory holds that integration assures coordination by creating a *central office* with authority to dictate the practices of each actor in the firm

- . E.g. The central office can assure home nurse availability
- . E.g. The central office can purchase software for everyone
- . ENH experience: ENH has been able to coordinate EMR purchases and operation for staff MDs, but has had less success persuading non-staff MDs to get on board. The result is an incomplete EMR for many patients

- Q: What are some other design attributes in health care?

2) Resolve problems when there is *asset specificity*

- Recall that assets are specific to a particular trading relationship if they are less valuable when deployed elsewhere
- Such specificity is usually a good thing
- Specific investments do not necessarily require integration
  - . But failure to integrate leads to potential “hold-up”
  - . Investing agent is at the mercy of its trading partner
- Again, the central office may ride to the rescue

Q: What are some examples of specific investments in health care?

These potential advantages of VI must be balanced against potential costs

- Production through many independent actors can be more efficient than production inside an integrated firm
  - . E.g., A free-standing community hospital and MD group can pick and choose where to send their referrals
- Integrated firms suffer from incentive and bureaucracy problems
  - . E.g., Alexian Brothers PHO

There is no good systematic evidence on the performance of integrated delivery systems. However, one can examine the various “components”

- Acquisition of MD practices peaked in late 1990s
  - . Hospitals lost as much as \$100,000 per acquiree
  - . Little evidence of offsets from, say, increased referrals, though it would not take much of a boost (from the right kind of patients) to justify the expense
- Hospitals accepting global capitation lost an average 10% of premiums collected. This trend died quickly.

*In-class discussion questions:*

Suppose that Coopers and Lybrand had not issued a clean bill of health to AHERF in 1996. As a result, the creditors of AHERF managed to oust CEO Sherif Abdelhak, just prior to the acquisition of the Graduate Health System. Now suppose that the creditors asked you to assess AHERF’s strategic direction. What changes, if any, would you recommend? Do you believe that AHERF could have avoided bankruptcy?

Do you believe that an integrated delivery system like AHERF could succeed in the Philadelphia market today?

## **Horizontal Integration**

Mergers between sellers at the same level of vertical chain, including MDs forming groups, Rx mergers, Insurance company mergers, etc.

Rationales for merger vary by type of organization

- MD mergers may facilitate risk sharing, data generation, and contracting
- RX mergers may exploit anticipated economies of scale in R&D or improve marketing and sales efforts

Perhaps the most significant horizontal integration trend in the past 15 years has been the creation of local hospital systems

In order to understand this second merger wave, we need to discuss a bit of terminology

- In any other market, we would consider a merger to be any case in which two firms agree to operate under a single corporate umbrella
- This is not the case for hospitals, for which we may use either “system” or “merger” to describe such consolidation

In both systems and mergers, two or more hospitals combine ownership

- In mergers, the hospitals combine their financial reporting and consolidate their operating licenses
- In systems, the hospitals report separate data
- It may be that mergers involve hospitals that have agreed to a stronger, almost irreversible commitment

What can local combinations accomplish?

- Market power – to be discussed. Surely an issue for many deals
- Efficiency
  - . Scale and scope economies exist for many hospital services
  - . Systems can eliminate duplicative equipment, administrative functions and better manage labor and supply inventories, especially if clinical departments are integrated
  - . Secure purchasing discounts
- Branding

As always, we need to ask whether hospitals need to combine to achieve these benefits. We should also ask whether consolidation assures that these benefits will be achieved

- Q: Does consolidation assure the benefits of scale economies? Is it necessary?
- Q: Does branding through merger help?

Of course, problems arise as organizations attempt to integrate

- Lack of independence and flexibility
- Bureaucratic influence costs, etc.
- The vast majority of CEOs say that implementation took far longer and was far more difficult than they had anticipated

There is growing evidence about the effectiveness of local consolidation

- Some studies look at systems, other mergers, using different methods.
- Here is a summary of the key findings:
  - . System consolidation saves very little money
  - . Merger consolidation saves a lot of money (perhaps 10% savings)
  - . Success of consolidation depends to a large extent on *clinical integration*
  - . There may be some branding benefits – even systems seem to command higher prices
- Stanford/UCSF; BJC; and AHERF are all good examples of the importance of clinical integration

There has also been considerable consolidation in the Rx industry

- Announced motive is to improve R&D effectiveness
  - . Neither theory nor evidence supports this motive
  - . Smaller research firms may be more innovative
- Could lead to sales efficiencies by removing duplicative sales force
  - . Evidence of sharp reductions in personnel following mergers
  - . But targets often have dwindling pipelines and might have cut back anyway
- In many ways, Rx industry seems to be *decentralizing*
  - . Q: Discuss

## **Antitrust Considerations**

The FTC and US DOJ recently leased a report entitled “Improving Health Care: A Dose of Competition”

This report offered a sobering look at how consolidation is affecting the competitive healthcare system

Let me begin by offering some examples that suggest the scope of potential antitrust problems in the US healthcare system

- A decade ago, the Federal Trade Commission blocked a merger attempt by Rite Aid and Revco – the two largest pharmacy chains nationwide (by store count) at the time of the proposed merger
- Single specialty physician groups in some metropolitan areas control over 50 percent of the local business.
- Hospital mergers in Rockford, Grand Rapids, Dubuque, Long Island, Waukegan, and elsewhere, have reduced the number of local competitors from three or more to just one or two; markets as large as Cleveland and Milwaukee have only 2-3 effective competitors
- The U.S. Department of Justice would not approve the merger of Aetna and Prudential unless the two giant insurers divested offerings in several major metropolitan areas

Antitrust law begins with the Sherman Act

Section 1: Prohibits conspiracies, combinations, and contracts in restraint of trade.

- Section 1 requires more than one independent actor
- But section 1 does not require a preexisting monopoly, nor is it necessary for firms to seek to monopolize
  - . E.g. Cases brought by prepaid groups against medical societies
  - . E.g. Maricopa County MD price fixing case

Section 2: Prohibits monopolizations, attempts to monopolize, and combination or conspiracies to monopolize interstate or foreign trade.

- Section 2 examines unilateral conduct, but pertains to monopoly or attempt to achieve monopoly — usually 60-70 percent market share

- . Section 2 speaks to illegal tying arrangements (e.g., Hyde v. Jefferson Parish Hospital)

- . Section 2 also speaks to mergers (e.g., ENH Healthcare)

- . The Clayton Act also addresses merger issues

- These cases often turn on the issue of whether the firm did, indeed, have dominant market share

- . The logic is that if a firm does not have a dominant share, then it could not harm consumers without losing business

- . Ergo, there is no need for the courts to protect consumers

Robinson Patman Act

- Prohibits price discrimination more broadly

- Firms may not set different prices to different buyers unless they have different costs of serving those buyers, or they must lower prices to certain buyers to "meet the competition"

The Brand Name Prescription Drug Antitrust Lawsuit

Plaintiffs were chain drug stores upset that drug makers had offered larger discounts to mail order pharmacy and PBMs

- Plaintiffs sought treble damages of \$100 billion or more.

- Plaintiffs main contention that the industry's system of granting rebates to certain customers was anticompetitive

- The plaintiffs alleged rebates facilitated price fixing – a Sherman 2 complaint.

- How rebates work

- . Regional warehouses that distribute drugs to all pharmacies. Drug makers set a single wholesale price per drug and send rebate checks based on shipments from warehouses

- . Plaintiffs questioned the need for this complex system but offered no direct evidence of a conspiracy. They alleged that the complexity itself was “proof”

- . Industry argued that system was convenient

- . Absent other evidence, judge rejected plaintiff claims

Plaintiffs also brought a Robinson Patman price discrimination claim

- Remember that it is illegal to charge different prices to different customers for the same product, unless the cost of serving each customer is different or sellers are “meeting the competition”

- Defense could not claim that costs differed, due to distribution system

- “Meeting the competition claim” has a “chicken and egg” aspect. Defense need only show that one group of customers is more price sensitive than another

The case came down to a discussion of why some pharmacies are more effective at securing discounts

- PBMs steered patients to certain drugs, effectively increasing the price elasticity of demand

- Retail pharmacies did no such steering, and were effectively price insensitive in the drugs they stocked

- Judge found that the rebate system and the discounts offered to certain buyers were consistent with competitive pricing and aided consumers

Most antitrust cases are brought by the government, rather than private parties

Currently, the FTC has jurisdiction over health care

- In the 1990s, the FTC attempted to block 7 hospital mergers
- It lost every case, usually on the seemingly obscure topic of geographic market definition

Here is how a typical merger case works:

- You first define a product market and a geographic market
- You identify the competitors in that market and compute their shares
- You determine if a merger will cause the shares to increase by more than a predetermined acceptable limit
- The same general approach is used to determine if an existing provider already has market power (in tying cases, for example)

The main issue, therefore, is how to define the market (the courts have accepted the “predetermined acceptable limit” and this is spelled out in published FTC/DOJ merger guidelines.)

To define markets, the FTC/DOJ propose something called the *SSNIP test* (small but significant, *non-transitory increase in price*)

- Begin with a very small proposed market. Ask the following:
  - . Suppose all the firms in the market were to set price collusively. Would they be able to sustain a SSNIP?
- If they could not sustain an SSNIP, then they must face additional competition (so that the proposed market definition is too small) or the likelihood of entry (in which case that threat of entry would be enough to discipline the market)
- Expand the proposed market size until the SSNIP test is satisfied

This raises a question: Q: How might you go about testing for the SSNIP?

Historically, the courts have relied upon something called the Elzinga/Hogarty criterion

- First proposed over 30 years ago as a way to define the geographic market for commodities such as coal
- Based on analysis of product imports and exports to and from a geographic area
- The E/H criterion: Inflows and outflows must both be less than 10 percent of the total market
- When implemented in healthcare, this implies that inflows and outflows of patients must be less than 10 percent
  - . No suburban area would be a market because at least 10 percent of residents travel to the central city for care
  - . No medium size cities would be a market because at least 10 percent of residents travel to larger cities, even cities located 50+ miles away

While the E/H criterion has some intuitive appeal, it is not based on any economic model

- I.e., there is no model to suggest that 10% flows (or 20% or any other percent) would be sufficient to prevent an SSNIP
- The main virtues of E/H are its intuitive appeal and ease of implementation, not its economic soundness
- It has been the *de facto* rule for market definition simply due to precedent

The FTC challenged E/H in the recent ENH case

- Described “two phases” of competition
  - . Competition to be in the network
  - . Competition for patients
  - . Prices determined in phase I
- Ken Elzinga testified that E/H was not intended for differentiated goods markets or for phase I competition
- FTC also presented data showing that mergers that passed the E/H test led to large price increases
  - . If E/H was correct, these markets should have still been competitive after the mergers

Some of the data came from my research with DOJ economist Cory Capps.

- We obtained hospital pricing data from one or more anonymous private insurers
- We examined pricing in markets that had experienced mergers that survived E/H analysis
- We regressed prices against two measures of market power based on much smaller market definitions that would be indicated by E/H
  - . The hospital’s own power
  - . The power obtained through consolidation
- The former might be positively related to price merely because better hospitals enjoy larger shares and higher prices.
- But the latter could only be related to price through power

Here are some key results focusing on the latter measure (*diffherf*) and price:

**Table 2: Cross-section Regression Results**

	<u>Large Metro Area</u>	<u>Two Small Metro Areas</u>	<u>Midwest State</u>	<u>Southwest State</u>
<i>Diffherf</i>	0.640**	-.047	0.291**	0.762**

\* Significant at  $p < .10$     \*\* Significant at  $p < .01$

Note the generally positive and significant relationship.

- The magnitudes are large as well.
- A “4 to 3” merger would be associated with as much as a 12 percent priced increase.
- If E/H were a valid method, we would not have observed any price increase (because E/H tells us that these hospitals compete in large markets and therefore have no power)
- Conclusion: E/H is wrong

The FTC won the ENH case. The remedy, however, is curious

- FTC is allowing ENH to stay together but follow a “messenger model” for pricing
  - . Evanston and Highland Park Hospitals must set prices independently
  - . Q: What do you think?

FTC subsequently challenged expansion by the Inova system in Virginia and won this as well

- Used a methodology designed to predict outcome of phase I competition
- Method developed here at Kellogg; a bit too complicated to explain in detail

## Antitrust law and vertical relations

A number of antitrust doctrines apply to vertical relations

- Most deal with the problem of *exclusionary practices*.
  - . Using power to drive out rivals
  - . Often takes form of using power in one market to dominate another market
- In healthcare, we often see claims of illegal tying and illegal bundling
  - . Hospitals are usually the target
  - . Hospitals may exclude doctors from practicing
  - . Hospitals may insist on exclusivity for outpatient services

*Illegal tying*: Extending monopoly power through tied goods

- Key application: *Hyde v. Jefferson Parish*; Supreme Court laid out principles for tying cases
- A firm that has monopoly power in one market (the "tying market") may not force consumers to purchase a product in another market (the "tied" market") that consumers could purchase separately
- Plaintiffs must show:
  - . Good could be purchased separately and there is a separate demand for it
  - . There is an economic link between the tied and tying good (e.g. hospital owns share of MD practice)
- Defendant may counter
  - . There is an efficiency rationale for the tying arrangement (e.g., it facilitates guidelines)
  - . There is no less restrictive way to achieve the same efficiency
- Application: *Vazirani v. Antelope Valley Hospital*

## *Illegal Bundling*

- Granting a discount on product A if consumers also buy product B
- Illegal (according to latest court decisions) if:
  - . Seller has market power in A
  - . Seller loses money on B if discount from A is allocated to B
- Application: PDSC versus OSFMC

## **Payer market power**

U.S. Senate has recently asked the GAO to study payer market power

- Traditional output market power
  - . Are markets excessively concentrated? (Recall AMA data)
  - . Does concentration lead to higher premiums
- Dafny et al. offer only credible data
  - . Have adjusted premium data from a benefits consulting firm
  - . Find higher premiums in markets with fewer competitors
- Also concerned about monopsony power
  - . AMA has been pushing for legislative exemptions to antitrust
  - . Doctors could “collude” so as to obtain countervailing power

Graph shows traditional economic analysis of monopsony

- Powerful buyers purchase suboptimal quantity at low price

A similar analysis would apply to network size

Does monopsony harm consumers?

- MCOs were a response to perceived inefficiencies in markets where quantities were too high

- When MCOs *negotiate* discounted prices (rather than announce a fixed price for all providers), access problems are limited.

. This is because most negotiations end up with a deal (provided there is positive value to be shared between the parties)

- If a dominant MCO faces some competition in the output market, it must offer consumers a deal that matches the competition.

. In this case, the discounts that it negotiates are only partially passed on to consumers

. The difference amounts to a transfer of wealth from providers to plans, without directly harming consumers

Can prices ever be *too low*?

- Reduce investments in quality (a similar argument about R&D is used by the Rx industry to justify its profits)
- MDs worry about viability of the profession
  - . For now, applications to medical school do not seem to have been affected
  - . Specialty choice has been affected by MC, however

Q: Should providers be permitted to collectively bargain with payers?