

Written Comments of the Pennsylvania Medical Society

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Introduction

The Pennsylvania Medical Society appreciates the opportunity to offer written comments in these proceedings regarding the organization and operation of health-care markets in the United States. While our organization works primarily at the regional and state level, we believe the observations contained in our statements generalize to other states and regions. Our remarks differ somewhat from those of other parties to these proceedings. Based upon our ongoing review of regional health-care markets in Pennsylvania and elsewhere,¹ we believe that these markets are undergoing a slow process of disintegration. We are most concerned that the potential exists for a "random event" that will accelerate this process beyond the ability of existing economic and political institutions to deal with it. We think that the Federal Trade Commission and the U.S. Department of Justice could have a great deal to say about health care market disintegration.

Fundamentally, it is our opinion that health care markets are regional in nature. Accordingly, we use regional areas in Pennsylvania as the relevant geographic market for our analysis.² From a product standpoint the markets consists of two segments: (1) the market for health insurance where health insurers act as sellers and where employers and government are the predominant buyers; and (2) the market for medical care in which physicians, hospitals and others sell services to health insurer and government (acting as an agent for consumers) buyers. See Figure 1. While government-sponsored health-care is a major portion of this industry, that portion of the industry is not primarily market-driven. Accordingly, we focus our review on private commercial markets for health insurance – and medical care delivered to enrollees of private commercial health insurance firms.³

Most of our comments derive from a "conduct-structure-performance" perspective developed by the antitrust courts as a surrogate for evaluating price elasticity of demand. While we have produced some work (and describe some results herein) that deals with price elasticity of demand in these markets, our studies consider market concentration and market conduct in order to assess market power.⁴

Our analysis differs somewhat from traditional conduct-structure-performance methodology found in the literature. The traditional approach considers market concentration for one group of participants in the market, usually sellers. We believe that a more effective analysis incorporates

¹ Now in its seventh year.

² For this analysis we use the four regions of the Pennsylvania as delineated by the four Blue Cross and Blue Shield firms. We have conducted a similar analysis at the MSA and the county level. The conclusions hold for any level of geographic analysis.

³ The product market used for this analysis follows Judge Posner's views in *Marshfield Clinic* by including all private commercial health insurance products. *Blue Cross and Blue Shield United of Wisconsin v. Marshfield Clinic*, 65 F.3d 1406 (7th Cir 1995). There are other valid approaches. See W. Sage, *Health Affairs*. We have considered other product definitions (fee-for-service, health maintenance and preferred provider products). Generally, the more narrow the product definition, the more concentrated the market. Accordingly, our comments hold generally for other product market definitions.

⁴ Hovenkamp, Herbert. *Federal Antitrust Policy: The Law of Competition and Its Consequence*. St. Paul, MN: West Publishing Co. 1994. Problem concentration and conduct act as a surrogate to infer market power.

comparative positions of both buyers and sellers in a market. Therefore, we describe and discuss comparative concentrations and conduct of sellers and buyers as the essence of market power.

Our comments are organized into four sections. In the first section we review the structure of health care market segments. We consider relative concentrations for health insurers and employers in the market for health insurance. We evaluate relative concentrations of health insurers compared with hospitals and physicians in the markets for medical care. The second section provides a description of market conduct. In particular, we concentrate on operating results, negotiating processes and contract terms. The third section provides our conclusions regarding market power. We consider the impact of barriers to entry and economies of scale and the implications of market power conclusions for the way that the markets operate. The final section contains a delineation of policy options.

We conclude that some health insurers and some hospitals in Pennsylvania possess market power that other participants (employers, smaller hospitals and physicians) do not have. The power imbalance has serious implications for premium levels and payments to providers. Moreover, these markets are creating changes in the health care delivery system that are not optimal for health insurance or medical care. While there are a number of policy options that can be considered to remedy this problem, they may not be able to produce a "first best" solution. In this context regulatory and countervailing power approaches may produce welfare-improving outcomes.

1. Market structure

Insurers. We begin our analysis of health-care markets by considering the structure of health insurers in Pennsylvania. Blue Cross and Blue Shield firms were the earliest providers of health insurance in Pennsylvania. These firms have entered into a contract - part of a national Blue Cross and Blue Shield Association agreement - that divides Pennsylvania into four regional markets. We understand that the national agreement "discourages" other Blue Cross and Blue Shield firms from competing with a member in its regional market.⁵

There are those who contend that health insurance markets are highly competitive.⁶ We strongly disagree, particularly as it pertains to Pennsylvania. Figures 2 to 5 show market shares for health insurance firms operating in each of the four Pennsylvania regional markets.⁷ The figures also provide Herefindahl-Hirshman (HHI) concentration indices. Each of the regions has a dominant health insurer. The least concentrated region, Central Pennsylvania, is served by a firm with a 53% (Capital Blue Cross) share and has an HHI in excess of 2300.⁸ The most concentrated

⁵ There is competition between Highmark Blue Cross and Blue Shield and Capital Blue Cross in Central Pennsylvania.

⁶ See testimony by the Health Insurance Association of America and reports by Charles River Associates prepared for it.

⁷ Data underlying the Figures are taken from 2001 Annual Reports filed with the Pennsylvania Insurance Department and from Annual Reports filed with the Pennsylvania Department of Health. This basic information is supplemented with figures from Atlantic Information Service, The Harkey Report and InterStudy. Data available from the Pennsylvania Medical Society Health Services Research Institute.

⁸ Recent termination of a joint operating agreement between Highmark and Capital could reduce the Central Pennsylvania HHI. However, in the long run it may also increase it.

region, Southeast Pennsylvania, has one firm that holds a 76% share (Independence Blue Cross) and has an HHI in excess of 6000.

Drawing the geographic markets more narrowly increases market concentrations. If we use the Metropolitan Statistical Area (MSA) as our unit of analysis, each of the markets in Pennsylvania is highly concentrated.⁹ See Figure 6.

In short, no matter how we define the markets from a geographic standpoint, the Pennsylvania health insurance markets are highly concentrated from the perspective of health insurers.

Employers. What about employers? An employer's market power (as buyer of health insurance) relates to the number of "covered lives" (employees) for which it purchases health insurance.¹⁰ Figure 7 shows the distribution of employers in Southeast Pennsylvania by firm size in terms of the number of employees employed by the firm.¹¹ As Figure 7 shows, most employers in Southeast Pennsylvania employ fewer than 250 employees. If all of these employers purchase health care for their employees (many smaller employers do not), the HHI index of employer concentration as purchasers of health insurance in Southeast Pennsylvania is less than 50. Obviously, the comparison between employer concentration (HHI<50) and health insurer concentration (HHI>6000) demonstrates a very large imbalance. Employer size distributions do not differ substantially in other areas of Pennsylvania.

In short, in every region of Pennsylvania employers are not nearly as concentrated (or as large) as health insurers. A comparative analysis thus indicates a problem market structure in each of the regional and MSA health insurance markets in Pennsylvania.

Hospitals. With the exception of regional referral or academic medical centers, most hospital markets operate at the county level or even more locally. Figures 8 through 12 provide measures of market concentration at the county level for the four regions in Pennsylvania. In Southeast Pennsylvania all of the county level hospital markets are concentrated and the Delaware County market is highly concentrated. See Figure 8. Moreover, more than 65% of the hospitals in Southeast Pennsylvania belong to integrated health systems. Each of the Western Pennsylvania MSA county (urban areas) level hospital markets is highly concentrated (with the exception of Fayette County). Of the non-MSA counties, only Forest County has a hospital market that is competitive. See Figure 10. Figure 11 demonstrates that all but two of the Central Pennsylvania counties have highly concentrated hospital markets. Finally, a majority of Northeast Pennsylvania hospital markets is highly concentrated while the remainder is concentrated. See Figure 12.

From a comparative standpoint a number of Pennsylvania hospital sellers are as or more concentrated than health insurer buyers. However, in most cases (with the exception of a few

⁹ With the exception of Harrisburg - with a concentration level of 1600 – which makes it concentrated but not highly concentrated. We use the Justice Department and the FTC merger analysis standards of 1000 for a concentrated market and 1800 for high concentrated market. U.S. Department of Justice, Horizontal Merger Guidelines. 57 *Fed. Reg.* 41552, 4 *Trade Reg. Rep. (CCH)* ¶13,104 (1992).

¹⁰ In actuality, many large buyers are self-insured. Thus, they do not participate in the market for health insurance. This makes the employer – purchasers even less concentrated.

¹¹ The source for this analysis is the Pennsylvania Department and of Labor and Industry, PALMIDS (2000).

academic medical centers) hospitals are not nearly as large as the health insurers. While there may be some potential for the operation of countervailing market power in the hospital markets, this potential does not apply market-wide.

Physicians. As demonstrated by Figure 13, approximately 60% of U.S. physicians are engaged in private or group practice. However, in Pennsylvania almost all of the physicians practice in groups of 10 or fewer physicians. In short, unlike health insurers and hospitals, physicians' practices are fragmented, even competitive in nature. In comparison to health insurer buyers of physician services, physician sellers are much less concentrated. This indicates the potential for problem market structure in the sale of physician services.

2. Market conduct

We evaluate the potential for market power by considering market structure and market conduct. Our analysis considers three types of market conduct: financial operating results, interactions between and among market participants, and contract terms.

a. Financial / Operating Results

Premiums and relative power of insurers and employers. Figure 14 shows private commercial health insurer premiums per member per month for Southeast Pennsylvania. With the exception of a slight dip in 1997, Keystone Health Plan East's (KHPE) premiums have steadily increased for the past ten years. KHPE is the subsidiary of Independence Blue Cross that provides HMO services. Independence, KHPE and QCC, another IBC subsidiary, collectively hold 76% of the Southeast Pennsylvania market. These results are reflected statewide. Figure 15 shows health insurance premiums per member per month for all health insurers in the Commonwealth. Since 1998, Blue Cross and Blue Shield premium increases (in absolute amounts) have outstripped those of other private health insurance firms. These figures suggest that the comparative market strength of the dominant health insurers in Pennsylvania (compared with the employers) has permitted them to increase premiums by greater amounts than other firms.

Health insurer profits, reserves and relative power of insurers and employers. Health insurance firms generate profits by increasing premium levels and by reducing costs (administrative costs or payments to providers). In this sense, operating profits can infer health insurer market power in relationships with employers (described above) or in relationships with providers (discussed below). Figures 16 through 19 show profit levels for individual health insurance firms in Pennsylvania. In each of the four regions the dominant Blue Cross and Blue Shield health insurer has generated substantial levels of profits-and these profit levels are increasing each year. By way of contrast, the other private commercial health insurers' operations have taken place at a "break even" level or at a loss. Figure 20 shows the collective impact for all health insurers in Pennsylvania. Blue Cross and Blue Shield firms generated more than \$500 million in 2000 and in 2001. Medicaid carriers had more than \$67 million in profits in 2001. Other private commercial firms lost \$12 million in 2001. These profit levels suggest that the dominant firms may enjoy substantial profits while other firms have difficulty breaking even.

Over time, operating profits that are not distributed contribute to increasing the reserves of health insurance firms. Figure 21 shows reserve levels for Pennsylvania health insurance firms. The reserve levels indicate the collective effect of profit streams. Dominant Blue Cross and Blue Shield firms enjoy substantial levels of reserves while other less dominant firms hold much smaller reserves.¹² As discussed in greater detail below, the effect of these reserve levels may be to erect barriers to entry. However, the existence and level of these reserves can also constitute conduct that infers market power.

Hospital operating profits. Hospital operating profits can be reflective of their relative market power. Figure 22 shows hospital operating profits by region as reported by Pennsylvania's Health Care Cost Containment Council. Figure 23 shows that system hospitals in Philadelphia generated more than \$200 million in profits in 2001 while stand-alone independent hospitals had difficulty breaking even. Figure 24 shows that the dominant health system in Western Pennsylvania, the University of Pittsburgh Medical Center, had \$180 million in profits in 2001 while the rest of the Western Pennsylvania hospitals operated at a break even pace. Once again, profit levels appear to correlate with concentration and size.

Figure 25 provides added insight into the reason for Pennsylvania hospital profitability. Hospitals in Philadelphia and Pittsburgh appear to be paid better than their national counterparts. This may be a function of both unit price and utilization. This in turn, may be attributable to a relatively favorable market position, particularly for the large system hospitals.

In short, Pennsylvania hospital operating profit figures tend to indicate that hospitals with greater bargaining power have better operating results than other hospitals that do not enjoy the same advantages.

Physician payments. What payment outcomes does the competitive nature of physician practices reflect? Figure 26 shows that physicians in the Philadelphia area are collectively paid at a level that put them 16th among the 25 largest urban areas in the country. Physicians in Pittsburgh are paid at a level that ranks them 20th.¹³ While these figures also include both unit pricing and utilization issues (which may be explained in part by relative physician surpluses), the comparison between payment levels for Pennsylvania physicians and hospitals is stark.

Figure 27 shows what may be one reason for the disparity. This Figure compares Medicare and Medicaid payment rates per procedure (for seven selected specialties) to national average private commercial insurer payments for the same procedures as indicated by two prominent national physician billing surveys. Medicare payments are substantially less than national average commercial insurer payments for the same procedures. In most areas physicians consider them to be inadequate. However, the dominant health insurer in Southeast Pennsylvania, even after a recent 13% physician fee increase, pays at approximately 83% of Medicare rates.¹⁴ Dominant

¹² The prudence of these reserve levels is a public policy question open to substantial debate. The Pennsylvania Insurance Commissioner is currently holding hearings on the issue.

¹³ Hospital payment ranks them second and third nationally.

¹⁴ The insurer notes that on a collective basis it pays near the national median based on higher than average utilization. However, individual physicians must work much harder to maintain similar incomes to physicians in other parts of the country or settle for substantially less income for the same workload.

health insurers in other areas of Pennsylvania generally pay slightly above or below Medicare levels. The market power imbalance may be having a profound impact on physician payment.

b. Process

A course of conduct between and among market participants can also infer the existence of market power. There is conduct in Pennsylvania health care markets that underscores the operating results findings. For example, the dominant health insurers in Pennsylvania are "price makers" in both the health insurance and medical care segments of the market. Some larger hospitals are also "price makers" while smaller hospitals tend to be price takers. All but the largest employers are "price takers" and most physicians are "price takers" as well.

Dominant health insurers quote premiums to employers. For smaller firms these premiums are not subject to negotiation. Basically, premium structures are imposed on these smaller employers. Even where premiums are negotiated the process is not indicative of a competitive market. The process of negotiation is one in which both parties are price makers. A "game theoretic" rather than the "unseen hand of the market" determines outcomes. Other problem conduct occurs in these markets as well including "take it or leave it" contract terms and imposition of "75% / 25%" rules.¹⁵

Similarly, dominant insurers dictate payment terms to smaller hospitals and negotiate payment arrangements with larger hospitals. In both contexts the dominant insurer is a price maker. Where the hospital is large enough to compel negotiation, it too is a price maker and the outcome will, once again, be based on game theory.

Finally, dominant insurers dictate payment terms to physicians in the form of physician fee schedules.¹⁶ For some larger (or strategically placed) physician groups payment terms are negotiated. Again, whether dictated or negotiated, health insurers are "price makers." Most physicians are price takers in this context.

A range of other ongoing conduct suggests market power on the part of industry participants. For example, dominant health insurers establish payment processing procedures that hospitals and physicians find difficult to challenge. As a result, the insurers' total unpaid claims have been increasing over time and at a substantial rate. Figure 28 illustrates this for Southeast Pennsylvania insurers. The unpaid claim payment trend is different in other regions of Pennsylvania.

¹⁵ In this practice the insurer requires 75% of an employer's employees to enroll with it as a condition of providing coverage to an employer. The employer is unlikely to refuse to offer coverage by a dominant insurer. To avoid the possibility that other insurers might enroll more than 25%, most employers offer employees only the dominant insurer's coverage. The 75% / 25% rule can have the effect of imposing an exclusive dealing arrangement.

¹⁶ The dominant health insurer in Southeast Pennsylvania has written a letter to physicians stating categorically that it will not negotiate fees with individual physicians. This position is based on administrative convenience.

c. Contract terms

Conduct inferring market power is also illustrated in the contract terms imposed by dominant health insurers.¹⁷ For example, the terms of health insurers' contracts with physicians are usually not subject to negotiation. The provisions of these contracts permit the health insurer unilaterally to fix (and change) fee schedules and to amend the contract at any time. The physician's decision is simple: agree to the insurer's changes or leave the network.¹⁸ Indeed, there are documented instances in Pennsylvania where health insurers have exercised this power: Independence Blue Cross in 1998, Blue Cross of Northeast Pennsylvania in 1999 and Geisinger in 2002.¹⁹

Other "adhesion" contract provisions found in dominant health insurers' contracts include "most favored payer" clauses and "all products" clauses. Most favored payer clauses require hospitals and physicians to bill the dominant insurer at a level equal to the lowest amount charged by the physician or hospital to any other health insurer in the region. This permits the dominant insurer to guarantee that it will have the lowest input costs in the market -- and can serve as an additional entry barrier. The all products clauses require physicians to participate in all products offered by an insurer as a condition of participation in any one product. Thus, if a physician wishes to provide fee-for-service care to patients, he or she will have to provide deeply discounted HMO and PPO services as well.

Other adhesion contract provisions include health insurer determinations of medical necessity, indemnification clauses, "gag" clauses and physician agreement to abide by a range of quality assurance, utilization review and other medical practice regulations, all without knowing in advance how onerous these provisions may become.

In short, the terms of contracts between health insurers and those who provide medical care services (hospitals and physicians)²⁰ also give the basis for an inference of the existence of market power on the part of some health insurers operating in Pennsylvania.

3. Conclusions regarding market power

The structure-conduct-performance analysis indicates that there may be a basis for finding market power on the part of health insurers operating in Pennsylvania and on the part of some larger hospitals and health systems. However, before such conclusion can be reached, it is necessary to consider entry barriers and economies of scale.

Barriers to entry. While subject to some criticism, "contestability" theory suggests that even though a market may be concentrated -- free entry and exit can make it competitive enough to compel participants to price at a competitive level. This suggests, for example, that if health insurers in a market are deriving "monopoly rents" new entrants will appear and will price at a competitive level, compelling the existing insurers to reduce price. Contestability theory claims

¹⁷ If the insurer did not enjoy some level of market power the physician would refuse to sign such contracts.

¹⁸ And in markets where a dominant insurer holds more than a 50% market share, it is almost impossible for physicians to decide to leave the network.

¹⁹ Indeed, some insurers even refuse to give physicians a copy of the fee schedule they use for payment.

²⁰ In Pennsylvania these contracts must be filed with the Department of Health and are subject to public review.

that given the threat of entry, existing insurers will not raise price. However, in Pennsylvania health insurance markets there is substantial concentration and significant levels of health insurer profit, yet there has been very little in the way of new entry.²¹ Why has there not been significant new entry?

We believe that the failure of new entry relates directly to the existence of significant entry barriers in Pennsylvania's health insurance markets.²² These include (1) the reserve levels of existing dominant insurers, (2) physician network "technology" in the form of information about the practice patterns of existing providers (hospitals and physicians), (3) contract terms that guarantee competitive advantages to existing dominant insurers and (4) name recognition that flows from both a pervasive advertising campaign and 70 years of service to the community. Further, a simple "tipping" phenomenon may exist that discourages new entry once a market reaches a certain point of very high concentration. Many Pennsylvania health insurance markets are concentrated enough to reach a tipping point.

Figure 21 shows the substantial levels of reserves (more than \$4 billion) maintained by Pennsylvania's dominant health insurers. In addition, the dominant health insurers hold more than \$2 billion in unpaid claims. These reserves and unpaid claims can provide a substantial deterrence to potential entrants. Existing insurers can invest reserves and unpaid claims assets, using the return on investment to reduce premiums for existing health insurance products. Any new entrant would have to have a competitive cost advantage (discussed below) or be willing to subsidize premium reductions for the same time as the existing dominant health insurers. It is extremely unlikely that potential new entrant would willingly take on such a burden.

In addition, a new entrant will be required to put together a network of providers. Given the willingness of providers to participate with insurers -- network recruitment would not appear to provide significant barriers to entry.²³ However, some providers give high quality medicine in an economically efficient manner while others do not. Existing health insurers have substantial amounts of data about existing providers. They have had years of experience dealing with quality and economic efficiency issues. It will take new providers years to gain this level of experience in order to get their network operating efficiently and effectively. In the meantime, problem providers can cost the new entrant dearly in terms of enrollee satisfaction, administrative burdens and utilization losses. In a competitive environment this is a substantial disadvantage and can discourage new entry.

In our discussion of market conduct we noted that there are a number of contract provisions that imply market power. These contract provisions can also discourage new entry. For example, "most favored provider" contract terms guarantee that dominant health insurers will always have the most favorable input cost structure in the market. If a new entrant cannot charge higher premiums (competition prevents this) and cannot have lower input costs (by virtue of MFP

²¹ Only one new private commercial firm has entered the Philadelphia market in the past seven years. In the past ten years several Medicaid carriers (new entrants) have received contracts from the Department of Public Welfare. These firms have attempted to broaden into the private commercial market with little success. Other than these firms, there has been no new entry in the Commonwealth for ten years. To the contrary, a number of firms have exited.

²² There are obvious entry barriers for hospitals and physicians in the markets for medical care.

²³ Indeed, it takes six months to a year to credential new physicians for a network in Pennsylvania.

contract clauses) the new entrant will never be able to compete effectively with existing dominant providers.²⁴

Blue Cross and Blue Shield firms have been providing high-quality health insurance coverage to Americans for nearly 70 years. They have obvious name recognition. In addition, Pennsylvania's Blue Cross and Blue Shield firms provide blanket advertising for their services. The combination of national name recognition and local advertising can provide a level of product differentiation that creates market power.²⁵

Finally, there is the possibility that at some point a firm can become so dominant that it becomes almost impossible for a competitor to make any headway in the market, even if the playing field is level. Such a "tipping" phenomenon appears to occur in health insurance markets.²⁶ There could be a number of reasons for such a dynamic. One factor that may play a role is the long-term viability of health insurers operating in a market. The public prefers long-term relationships with providers of medical care and with health insurance companies. If a dominant health insurer appears to be gaining market share while other firms in the market appear to be losing it, employers may question the long-run commitment of non-dominant firms to remain. If each of the employers elects to change to the dominant insurer based on these concerns, in a short time the dominant firm will be the only firm left. Thus, at some level a large market share becomes self-enforcing.

Economies of scale. Health insurance firms that seek merger approval commonly advance an argument that the merger will improve operating efficiencies and will develop economies of scale.²⁷ Accordingly, they contend that health insurance markets will operate more efficiently with a large dominant health insurance company. Usually, these arguments are misplaced.

While there is not much research on the topic, there are two papers that indicate economies of scale for health insurers are exhausted at the 50,000 to 100,000 enrollee level.²⁸ Most of the dominant firms that we have discussed have an enrollment in excess of one million members. It is more than possible that these firms are operating in the "diseconomy of scale" range, presenting more problems than they resolve.

There are more rural areas that can support only one health plan or one hospital. These areas, where economies of scale are found, actually present public policy problems rather than

²⁴ Unless the new agent could produce substantial administrative efficiencies. However, the new entrants usually have more administrative costs rather than less.

²⁵ Indeed, a comprehensive advertising campaign by a firm with large market share should provide the basis for questions about the goals of the advertising campaign.

²⁶ For a more complete illustration of tipping phenomena see Schelling, T., *Micro Motives and Macro Behavior*, Boston, MA: W.W. Norton & Co. (1978)

²⁷ For example, Blue Cross of Western Pennsylvania made exactly this argument in 1996 when it sought approval to merge with Pennsylvania Blue Shield. During the past five years these efficiencies and economies have not reduced costs or employer premiums. They have improved profits.

²⁸ Wholey, D., and R. Feldman. The effect of market structure on the HMO premiums. *J. Health Econ.*, Vol 14, No. 1 (1995). Given, Ruth. S., "Economies of Scale and Scope as an Explanation of Merger and Output Diversification Activities in the HMO Industry," *J. Health Econ.*, Vol. 15, pp. 685-713 (1996).

resolving a debate. If a given market is truly a natural monopoly, the question becomes how to regulate the conduct of the natural monopolist. This is of particular concern in health care where price increases translate to added numbers of uninsured patients and limited access to medical care.

Conclusions regarding market power: In short, at least in Pennsylvania if not generally, market structure and conduct implies the existence of market power on the part of dominant health insurers in each region of the state as well in each urban market -- and on the part of a number of larger hospitals and health systems. We have been able to test this proposition in Southeast Pennsylvania by considering the demand curve facing health insurers in their sale of health insurance to the employers. See Figure 29. Health insurance firms in Southeast Pennsylvania face a downward sloping demand curve, the classic attribute of monopoly. Moreover, the implication of market power is not negated by free entry and exit in these markets. To the contrary, it appears that there are substantial entry barriers. In case of some health insurers and some hospitals, there may be natural monopoly considerations. This at least suggests that these firms need to be regulated.

3. Policy prescriptions

Given the problems identified above (market structure, conduct and the implication of market power), what public policy response will produce a welfare-improving outcome? A first best response would be to restore full and open competition in the markets. However, this will produce substantial economic and practical issues. The most optimal "second-best" response would be to develop a "countervailing power" intervention. Third on the hierarchy of policy interventions would be regulatory oversight of market participants that hold and exercise market power. In any event, we recommend that the FTC and Justice Department develop a comprehensive research agenda that will provide greater insight into the issues that we have presented.

a. Restoration of competition

The evolution of concentrated markets and market power-enhancing conduct are both within the enforcement purview of the Justice Department and the Federal Trade Commission. Simply put, these agencies could bring appropriate actions to "break up" concentrated firms (health insurers and hospitals) and to limit market power-enhancing conduct.²⁹ However, such a policy intervention may be impracticable to accomplish. First, many if not most of the market-dominant health insurers are extremely large national or regional firms. The process of developing and pursuing antitrust enforcement actions will require application of a substantial amount of public resources, a strategy for which it may be difficult to generate public enthusiasm.³⁰ Moreover, market-dominant hospitals may also have substantial amounts of reserves and other investments that they will commit to defending antitrust enforcement actions.

²⁹ We do find it ironic that Justice and the FTC have committed substantial resources to issues involving relatively small numbers of physicians while giving almost no attention at all to the structure and conduct of large health insurers and hospital systems.

³⁰ Large antitrust enforcement actions in recent history such as those involving Microsoft and AT&T were extremely expensive and did not enjoy broad public support.

Regional and community hospitals often enjoy high levels of public support. Accordingly, it may be quite difficult from a political standpoint to bring enforcement actions against them.

Indeed, the very premise of using antitrust enforcement action to restore competition to these markets presumes that they can be competitive. There is economic theory that suggests health insurance markets can be competitive. Restoring competition to them could be welfare-improving.³¹ However, medical care markets -- particularly hospital and physician services -- exhibit a range of underlying competitive problems. Of the four classic attributes of a competitive market (many small buyers and sellers, homogenous products, perfect information, free entry and exit) hospitals have problems with all four and physician services have problems with three of the four.³² Since the market for health insurance and the market for medical care are related, attempts to restore competition may fail to solve the underlying problems because hospital and physician services are not, by their very nature, fully competitive.³³

In addition, in less urban areas economies of scale suggest the existence of natural monopolies in health care industry. If (as discussed above) the optimal size of a health insurer is between 50,000 and 100,000 enrollees, many locales will support only one health insurance company. If (under a very old standard) an area can support three to four hospital beds per 1000 people and if the optimal size of a hospital is between 200 and 400 beds³⁴ an area with a population of 100,000 or less may be able to support only one hospital. Thus, in quite a few localities there will be natural monopolies. Attempts to introduce competition in these areas will be ineffective.³⁵

In short, whether based on political considerations, market breakdown or economies of scale, restoration of competition to health insurance and medical care markets may not resolve any of the current issues confronting the health care industry.

b. Countervailing power

If we cannot accomplish a "first-best" (perfectly competitive) solution to the problems faced by health insurance and medical care markets, an effective "second-best" solution may be to develop a countervailing power response. The concept of countervailing power or "bilateral monopoly" dates to the Nineteenth Century when it was described by Cournot and Menger. Develped by Bowley and further elucidated by Sherer in the 1970's³⁶ and by Sherer and Ross in the 1990's, and most recently, by Blair and Harrison,³⁷ the basic idea is that to give

³¹ Pauly, M, *Q. J. Economics* (1988).

³² This suggests, however, that hospitals and physicians have market power. It fails to explain health insurers' market power.

³³ In addition, the medical care market fails to satisfy a number of additional conditions for perfect competition such as the absence of externalities (Samuelsson 1954), instantaneous dynamic adjustment (Bator 1955), price signaling quantity imbalance rather than quality affects (Stiglitz,).

³⁴ Not based on scientific studies.

³⁵ This does not mean that there is not public policy role to play in these markets. Merely that attempts to restore competition will not work. Natural monopoly markets suggest the need for some form of regulatory intervention.

³⁶ Bowley, A., *Bilateral Monopoly*. *Economic Journal* Vol. 25, p. 651 (1928). Scherer, F. M. and D. Ross. *Industrial Market Structure and Economic Performance, 3d Edition*. Boston, MA: Houghton-Mifflin (1990).

³⁷ Blair, R. and J. Harrison, *Monopsony, Antitrust Law and Economics*. Princeton, NJ: Princeton Univ. Press (1993).

countervailing power to a party dealing with a monopolist or monopsonist can be welfare-improving.

(1) *The sale of health insurance*

As shown in Figure 30, the usual unilateral monopoly health insurer deals with employers that do not have market power. The insurer will fix quantity (Q^1) of health insurance products (denoted 'x') to minimize its marginal cost of production. This is the point where the firm's marginal cost curve passes through the minimum point on the average cost curve and where marginal revenue equals marginal cost. The firm's price (P^1) will be fixed at the level where the market just clears for this level of production, at quantity Q^1 in Figure 30. The firm's downward sloping demand curve (the hallmark of monopoly power) shows that quantity will be restricted (from competitive quantity levels Q^0 to monopoly quantity Q^1) and price will be increased (from P^0 to P^1) compared with a fully competitive market. *Compared with competition, consumer surplus or social welfare will be reduced (from triangle AP^0B to triangle AP^1C in Figure 30).*³⁸

However, if employer purchasers are given countervailing power (either through size or joint purchasing) the health insurer will no longer have the power to fix price in a unilateral manner. If the employer and the health insurer were one firm³⁹ (what Blair & Harrison call the "integrated solution") they would fix quantity with reference to input costs. Specifically, they would fix the quantity of each input (added health insurance and all other production inputs) where the marginal revenue product of adding an input (the benefit it produces) equals the marginal cost of adding the input.⁴⁰ See Figure 31. Compared with the monopoly solution, price drops (from P^1 to P^2) and quantity increases (from Q^1 to Q^2). Consumer surplus or public welfare increases. While the integrated bilateral monopoly solution will never be better than a competitive equilibrium it can approach it in the limit as the integrated solution marginal revenue product curve approaches the competitive market demand curve. However, the integrated bilateral monopoly solution will always be better than either a unilateral monopoly because quantity produced, Q^2 , will be greater than Q^1 and the integrated solution price, P^2 , will be less than the monopoly price, P^1 . See Figure 31.

In most situations health insurers are not integrated with employer buyers. Thus, they will "solve" the problem of quantity produced and price through the bargaining process. Absent real distortions in the bargaining process, rational health insurers and employers will both discover that quantity Q^2 will maximize their joint gains or will serve as a focal point. This establishes a bargaining range for price between P^3 and P^4 as shown in Figure 32. At P^3 the health insurer extracts all of the benefit (profit) from added production of the employer's goods. This is limited by the demand for health insurance by the employer, the point where quantity curve (Q^2) intersects the average net revenue curve for the employer. At P^4 the employer gets all of the benefit, the point where the quantity curve intersects the health insurer's average cost (of producing health insurance) curve.

³⁸ Markets where only health insurers have market power reflect such a reduction in overall benefits.

³⁹ Such as the University of Pittsburgh Medical Center's health insurance plan.

⁴⁰ Theoretical mathematics available from the authors. See Blair & Harrison, pp. 114-15.

Comparing total consumer surplus – or public welfare – in the employer / health insurer bargaining setting and in the unilateral monopoly setting, quantity produced will always exceed the monopoly level. At the extreme end of the range the price to the employer for health insurance may exceed the monopoly price, but the added production (better access for consumers) levels will equate to improve consumer surplus. Triangle AP^3C (the bargaining solution with the health insurer deriving all of the benefit) in Figure 32 will always have more area than triangle AP^1B (the monopoly solution).

Finally, there are settings where hospitals have monopoly power in the sale of hospital services to health insurers.⁴¹ The foregoing logic applies these settings as well. Where the hospital has unilateral monopoly power (health insurers do not have market power) the price of hospital services will be elevated and the quantity demanded will be reduced compared to a competitive solution. Giving countervailing power to health insurers produces a welfare-improving outcome when compared with a hospital monopoly setting (although it may not be as good as pure competition). If hospitals have a natural monopoly (due to economies of scale or market breakdown) encouraging a countervailing power response (relaxed application of the antitrust laws) may be an appropriate public policy position.

(2) Monopsony purchasing by health insurers

While health insurers argue strenuously to the contrary, countervailing power theory also applies both to hospital and physician sales of medical care to health insurers that have market power.

Figure 33 shows equilibrium levels when there is a unilateral health insurer monopsony in the purchase of medical care services (denoted ‘y’ in Figure 34). The health insurer’s market power enables it to reduce price. The health insurer monopsonist does this by fixing quantity demanded to the point where its marginal factor cost (the added burden or cost of one more unit) equates with the marginal revenue (the benefit) it derives from adding the unit to its production mix. This is quantity Q^5 in Figure 33. The hospital or physician without market power is willing to provide the service so long as price exceeds the marginal cost of production. Thus, the health insurer reduces price to P^5 in Figure 33. Compared to a competitive market for medical care services price and quantity are both reduced. This equates to lower levels of consumer surplus.

If the hospital or physician is given countervailing (monopoly) power, the solution is similar to that described in the monopoly setting above (Figure 32). Again, quantity is fixed equivalent to an “integrated firm” solution (level Q^6). A fully integrated price would be P^6 in Figure 34. The bargaining range for non-integrated solutions fixes quantity at Q^6 . This establishes the bargaining range between price P^7 (the intersection of Q^6 and average net revenue derived from producing medical care services) and P^8 (the intersection of Q^6 and the hospital or physician’s average cost of producing medical care services) as shown in Figure 34 with the limits set by provider dominance (P^7) or health insurer dominance (P^8) of the bargaining process. Again, countervailing power improves consumer surplus by increasing quantity produced.⁴²

⁴¹ There are settings where physician groups can have market power. This analysis applies there as well.

⁴² A review of the combination of countervailing power in medical care market and countervailing power in the health insurance market is complex but tractable. It, as well as a mathematical treatment of theories described herein, is available from the authors.

(3) *Countervailing power policy*

The health care industry is based on two integrated transactions with three levels of participants: the provision of medical care services to patients with health insurers (acting as agent for the patients and employers) and the sale of health care insurance by these health insurers to employers (who also act as agent for their employees as potential patients). The industry provides optimal levels of efficiency where there is effective competition at each level (providers, health insurers and employers). However, a complete countervailing power solution provides a welfare-enhancing outcome if there is “market power” at any level.⁴³

We see the operation of countervailing power theory in the operation of employer bargaining cooperatives. Ostensibly appropriate under the antitrust laws,⁴⁴ employer buying coalitions improve public welfare when they provide countervailing power to sellers of health insurance who enjoy market power.⁴⁵

Hospitals in a number of markets already enjoy some market power through mergers, acquisitions and exit from the market. And, there is some recent evidence from large cost increases that hospitals may be using their market power to reallocate resources from health insurers, from employers and even from physicians.⁴⁶ A first-best enforcement action would reduce the market power of the hospitals to reintroduce competition in the hospital market. However, as described above, hospital services may constitute a natural monopoly in many areas. Here, a welfare-enhancing intervention would allow health insurers to maintain countervailing power.

Unlike hospitals, health insurers and employer coalitions, physicians do not generally have market power.⁴⁷ In the midst of industry consolidation and dictated payment and fee schedules, physicians have sought to gain countervailing power by collective action. Some level of physician collective bargaining power has been recognized as appropriate and permitted by the 1996 Department of Justice and FTC Guidelines. However, a number of physician collective action activities such as unionization efforts (in Delaware) and the formation of large physician groups have been opposed by and prosecuted by the FTC. Physicians have attempted to gain countervailing power legislation at the federal level (the “Campbell bill” of the last Congress) and the state level (so-called “state action bills”). Generally, these efforts have been adamantly opposed by the health insurance lobby⁴⁸ and the FTC. This opposition has not assessed the full extent to which countervailing power has the potential to be welfare-improving. Revisiting this

⁴³ For two examples: First, if a health insurer has unilateral market power welfare will be improved by giving providers countervailing power and will be improved even more by giving employers countervailing power as well. If a hospital has monopoly power welfare is improved by giving health insurers countervailing power and, since insurers now have market power employers need to have countervailing power as well.

⁴⁴ Georgia has adopted specific legislation enabling it. Ga Code § 33-30A-1 (1997).

⁴⁵ They can raise issues in competitive health insurance markets.

⁴⁶ The Federal Trade Commission has recently announced that it will investigate hospitals' use of market power in post-merger settings. This suggests the need for it to carefully consider whether a particular market is exhibiting attributes of hospital monopoly power over competitive health insurers or whether it represents hospitals exercising countervailing power in their dealing with a monopsony health insurer. The former is a problem. The latter is not (unless public policy has a preference for insurers over hospitals).

⁴⁷ A few strategically placed physician practices may have it.

⁴⁸ Many health insurers would lose their unilateral monopoly.

opposition – at least in the form of additional research and review – could help improve antitrust enforcement theory.

Finally, countervailing power settings suggest the need for some regulatory intervention. Unlike perfect competition, countervailing power is "second-best" by its very nature. In a market like health care full application of the theory will provide three "price-making" parties: providers, insurers and employers. In such a setting outcomes (within a range) will be determined by a game theoretic in which the party with the greatest level of power may prevail. This suggests the potential need for a "referee" although a welfare-enhancing outcome will occur without one.

The health insurance lobby argues stridently that countervailing power legislation will increase health care costs. It points to two industry sponsored studies and some government studies to support these contentions.⁴⁹ In point of fact, these studies totally and expressly fail to consider countervailing power theory.⁵⁰ They assume that health insurers are not already maximizing revenue. This flies in the face of economic theory and common sense. Health insurance studies contend that countervailing power legislation will increase health care costs between five and 25%. Interestingly enough, during the past year health insurers increased premiums between 10% and 30% and, we believe, would have raised them even more if employers would have been willing to pay the increase. This had nothing to do with countervailing physician (or for that matter, hospital) power. In short, policy makers concerned with rising health-care costs ought to carefully consider the role of monopoly health insurers in the cost increases in addition to the responsibility of other industry participants.

c. State regulation

Failing federal intervention to restore competition to health care (insurance and medical care) markets or an effective federal countervailing power response, the problems created by market power in health care generate substantial pressure for states to regulate the industry. State regulation can take a number of forms including state countervailing power legislation ("state action" laws), regulation of industry prices (profit levels and levels of reserves) and regulation of conduct by the industry participants. While the drawback to a state specific approach is that it provides differing responses in different areas of the country (which may make it difficult for multi-state operations), major advantages include the fact that state regulation least provides some response to the problem. State intervention in problem health care markets also gives an opportunity for them to act as laboratories to invent and measure the effectiveness of solutions for a persistent nationwide problem.

⁴⁹ During the FTC's workshop the health insurance lobby stated that the markets for health insurance are competitive and that there is full and other than and effective negotiation between health insurers and physicians in the market for physician services. These two statements are simply incorrect. In many areas of the country dominant health insurers are "price makers." In most areas of the country health insurers unilaterally impose fee schedules on physicians. There is neither competition for physician price nor effective negotiation between health insurers and physicians.

⁵⁰ Even knowing about countervailing power theory from reports for which they have offered rebuttals the health insurance industry disingenuously states that there is no economic theory that supports countervailing power notions if.

d. Additional research

Finally, regardless of any other public policy intervention, we strongly urge that policymakers recognize the seriousness of health care industry market problems and develop an enhanced economic research agenda that deals with these issues. Better knowledge about a number of issues that we have raised would elevate policy debate -- and improve the opportunity for solution of these problems. The following are a few initial ideas regarding such a research agenda. They are by no means intended to be exhaustive.

For example, there is very little research regarding the optimal size of industry participants. What is the best size for health insurance companies, for hospitals, for employer purchasers of health insurance and for physicians' practice of medicine? If we had better answers to these questions we might be able to improve our evaluation of the seriousness of growing concentration in the health insurance industry and in the delivery of medical care. In addition, it would be helpful if we had better understanding of entry barriers in these markets and the existence and impact of economies of scale. Also, improved understanding of inherent market breakdowns (particularly for hospital and physician services) could help direct attempts to keep these markets competitive and the role of antitrust enforcement in inherently problem markets.

Moreover, given the rather low level of debate regarding countervailing power and countervailing power theory, it would be important to further investigate and clarify concepts about its impact in health-care markets.⁵¹

It would also be helpful to develop a research agenda that evaluates the effect of state intervention in health insurance and medical care markets including the impact of "state action" doctrine in those states that have enacted such legislation as well as the impact of price, quantity and quality regulation on the markets.

⁵¹ Indeed, it might be very useful to conduct some demonstration projects that permit employer and physicians collective bargaining, assessing the impact of their outcomes on health insurer premiums and hospital and physician payments.

Figure 1
The Markets for Health Insurance and Medical Care

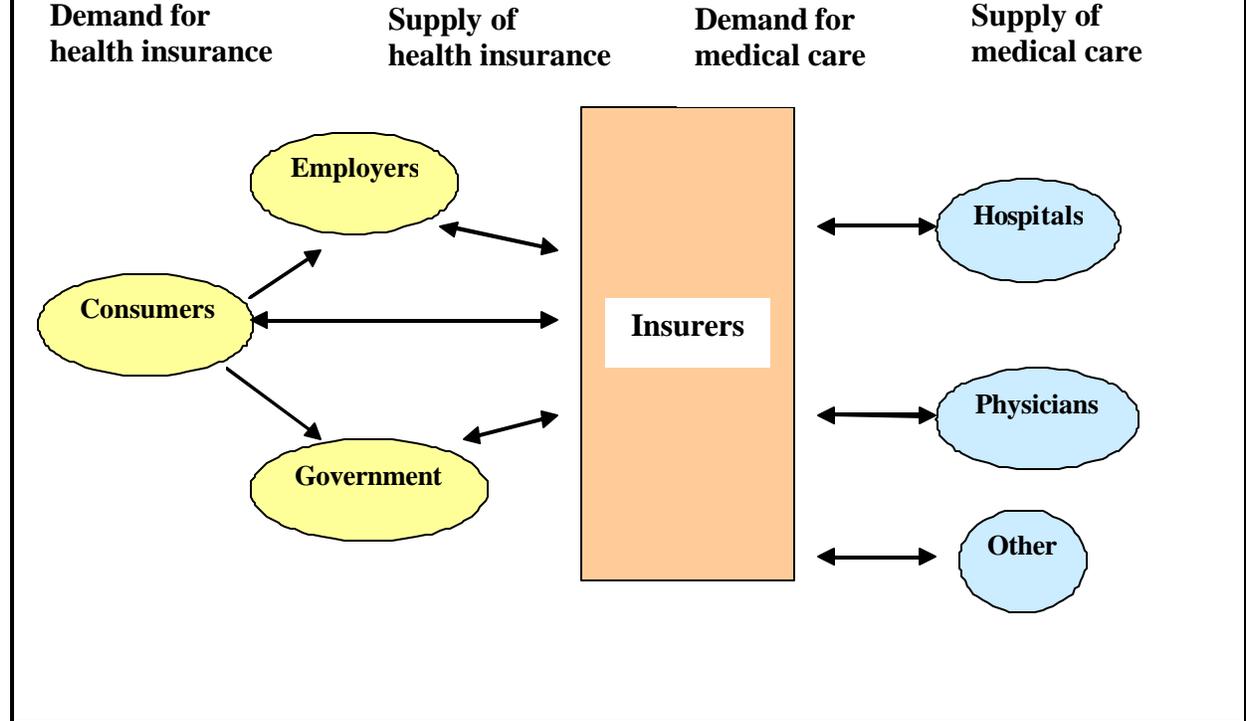


Figure 2
Southeast Pennsylvania Health Insurer Market Shares - All Products

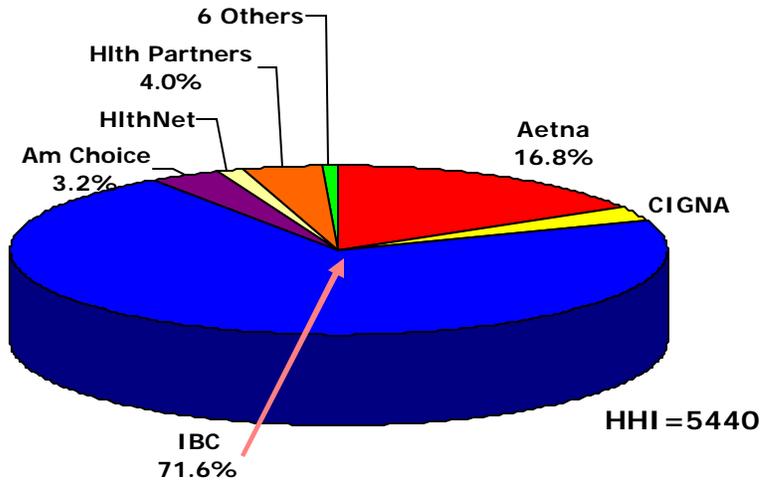


Figure 3
Western Pa Market Shares - Private Comm Products

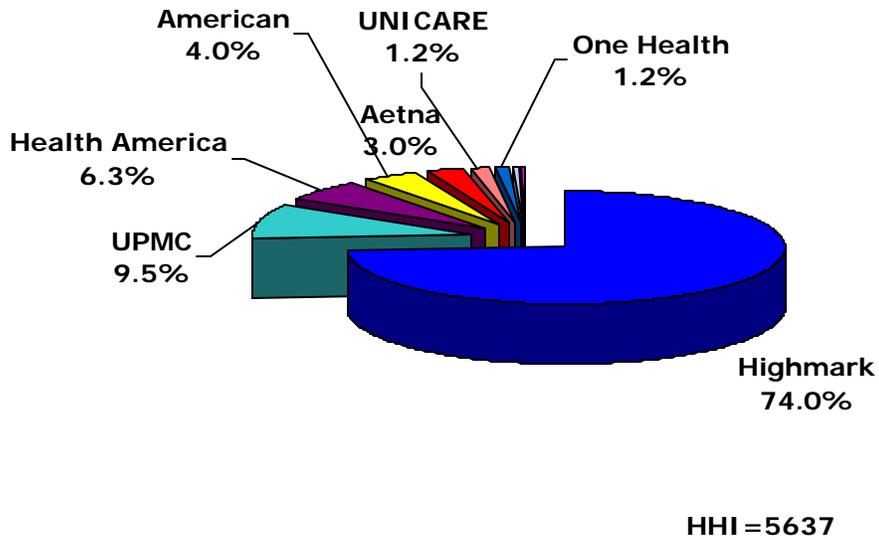


Figure 4
Northeast Pa Market - Private Commercial

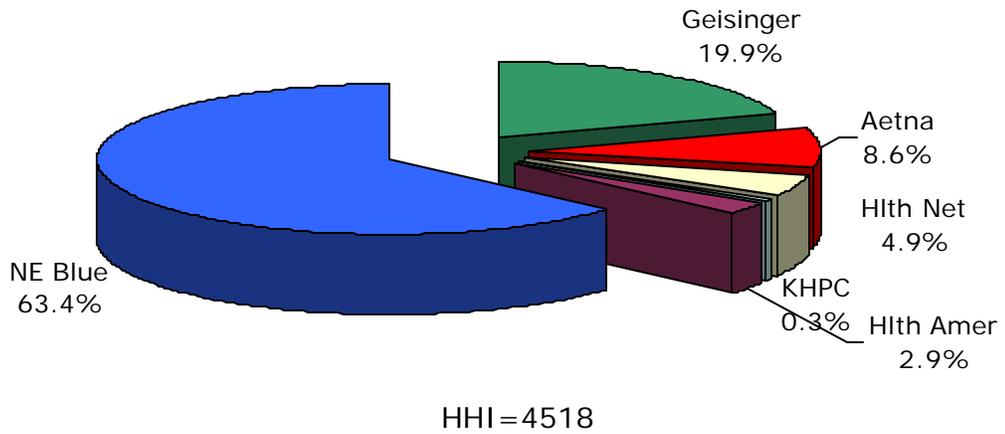


Figure 5
Central Pa Market Shares - Private Commercial

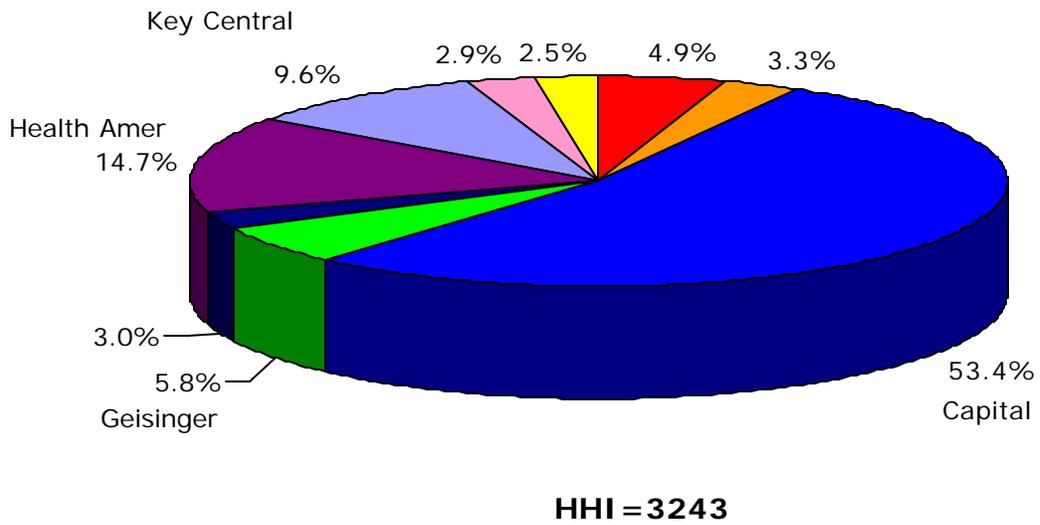


Figure 6
Pennsylvania MSA Markets for Health Insurance
Market Concentration

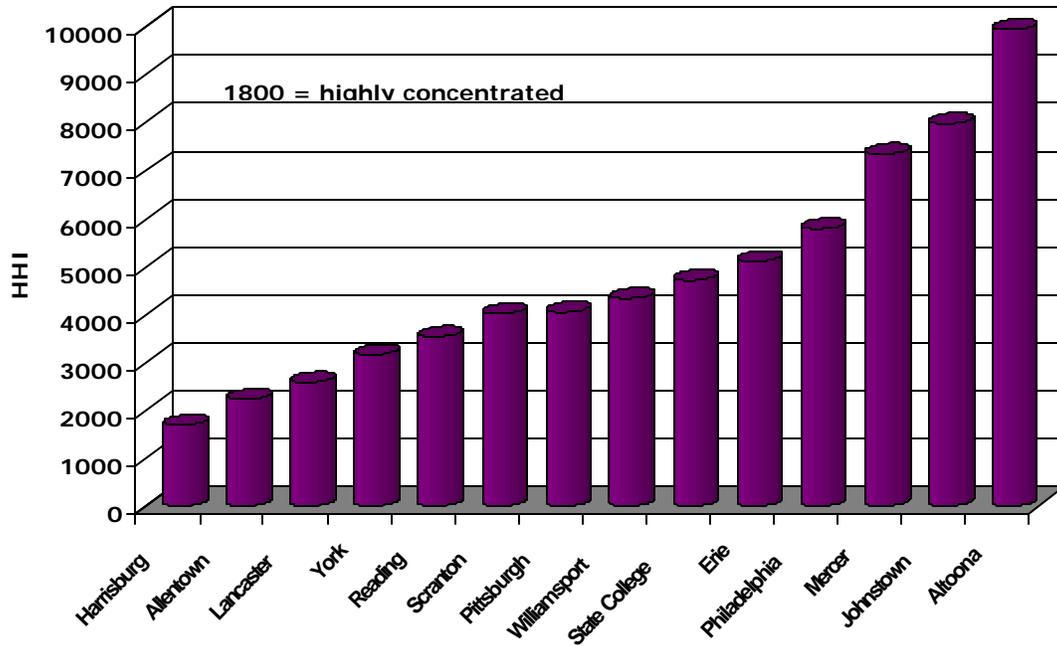


Figure 7
Distribution of Firms by Size - Southeast Pennsylvania Counties

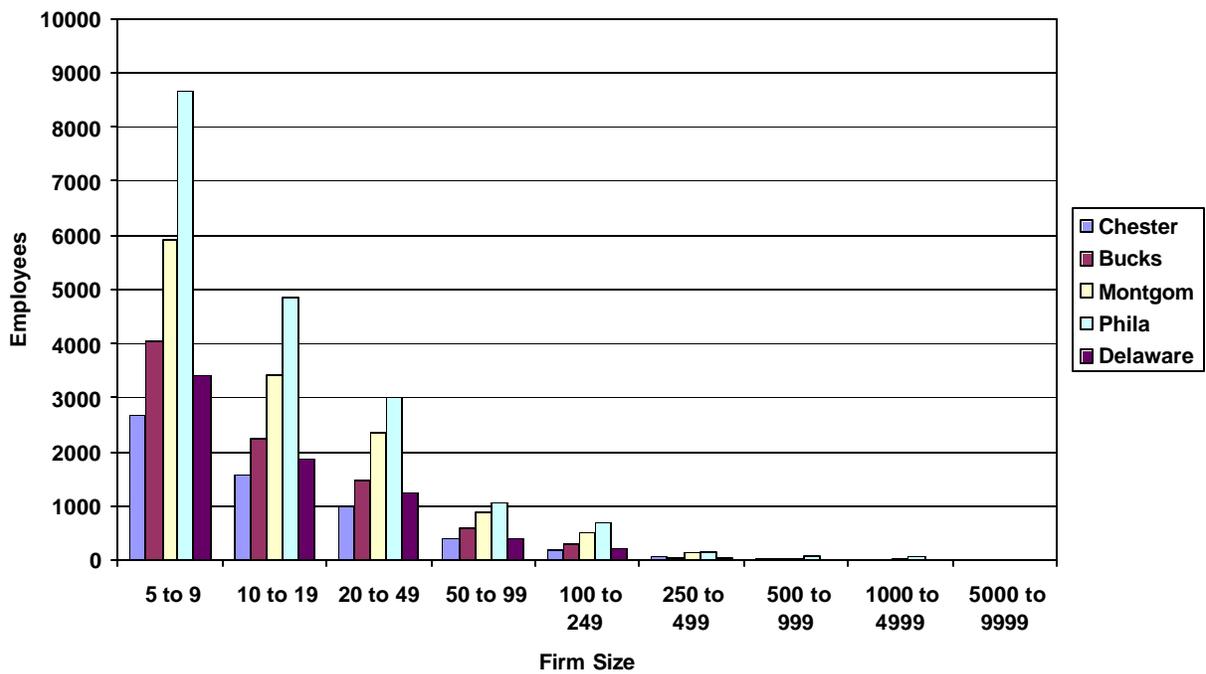


Figure 8
Southeast Pennsylvania -
County Level Hospital Markets

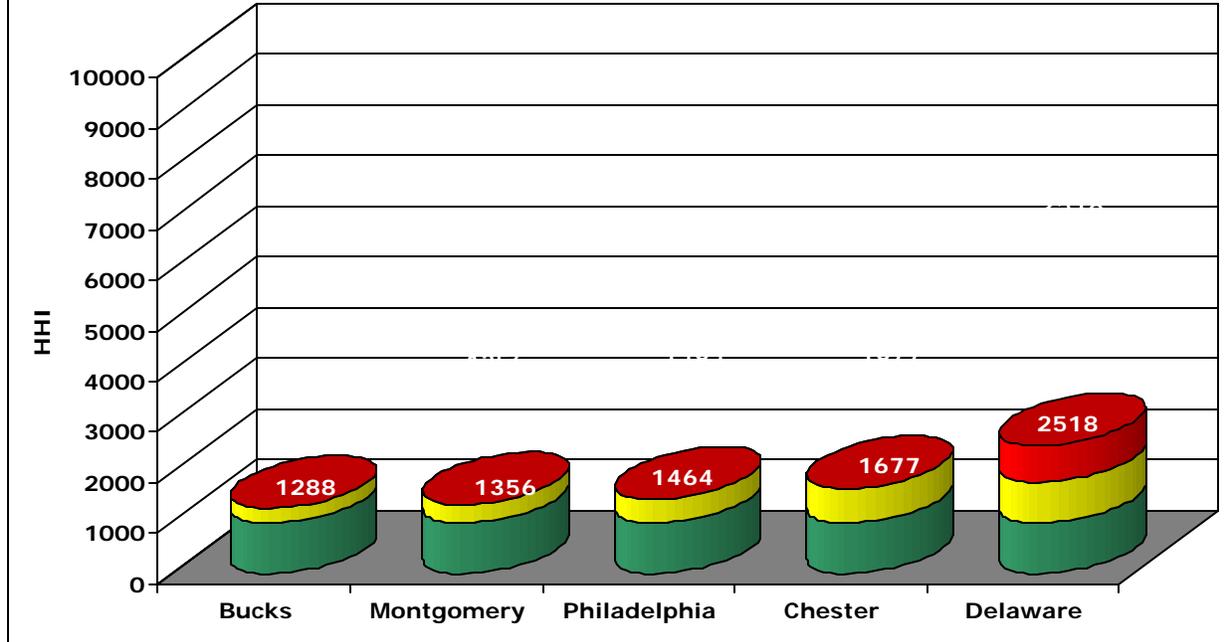


Figure 9
Western Pa MSA Counties - Hospital Concentrations

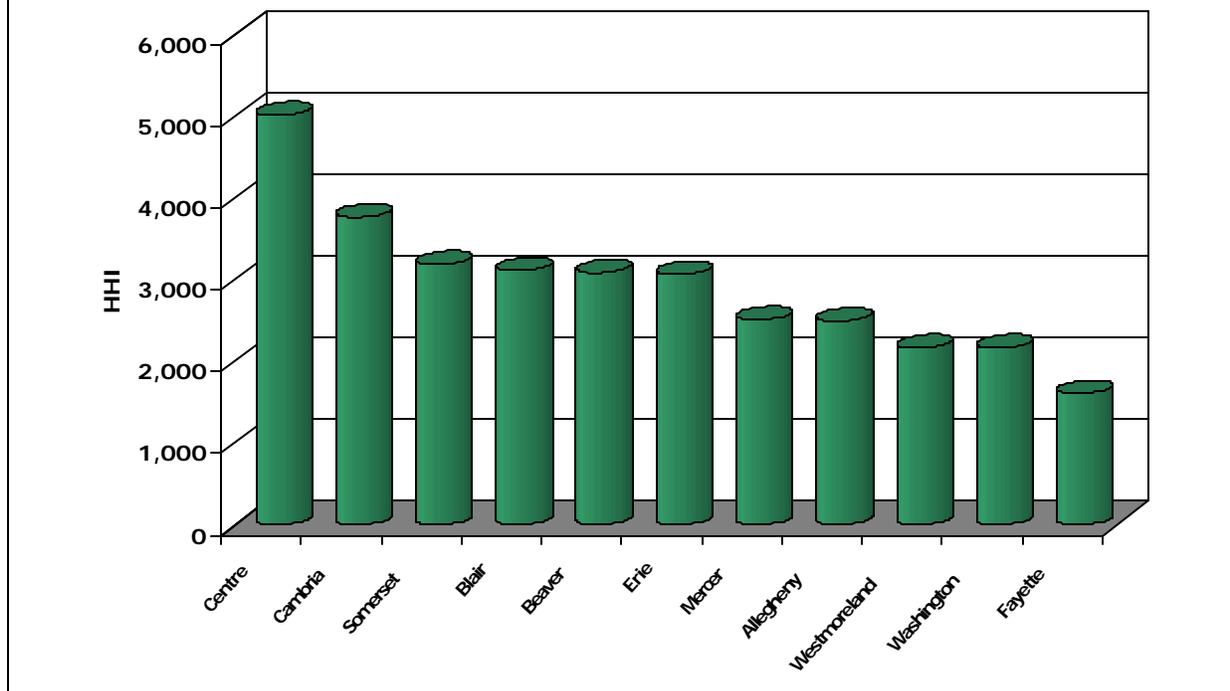


Figure 10
Western Pa Non-MSA Counties-Hosp Concentrations

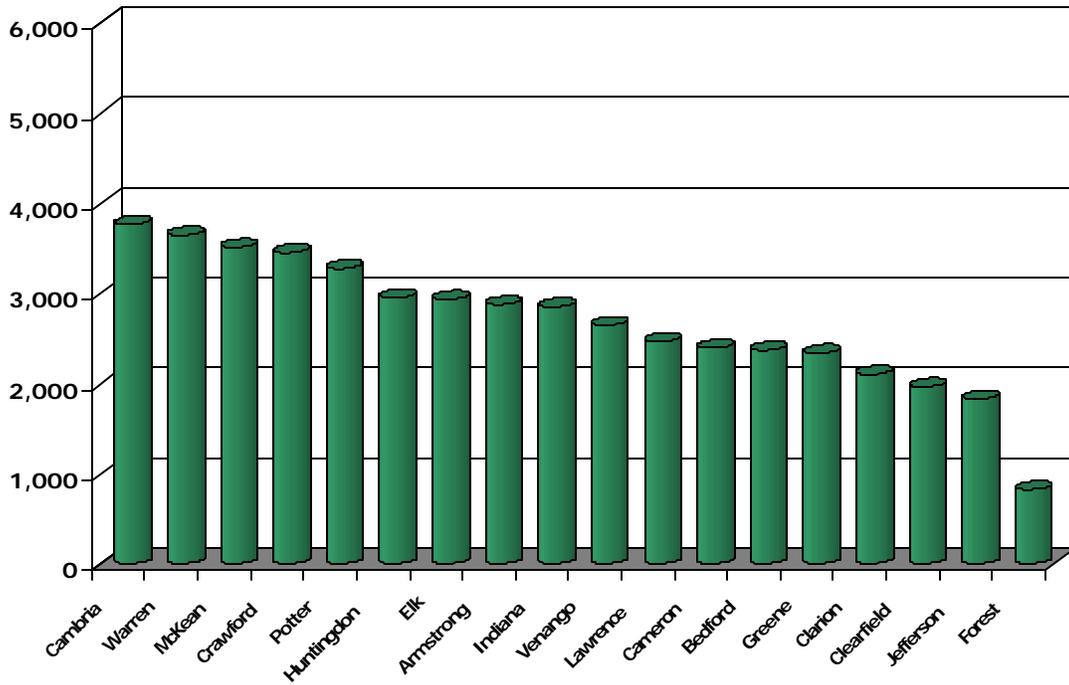


Figure 11
Central Pennsylvania County Hospital Markets - Concentration

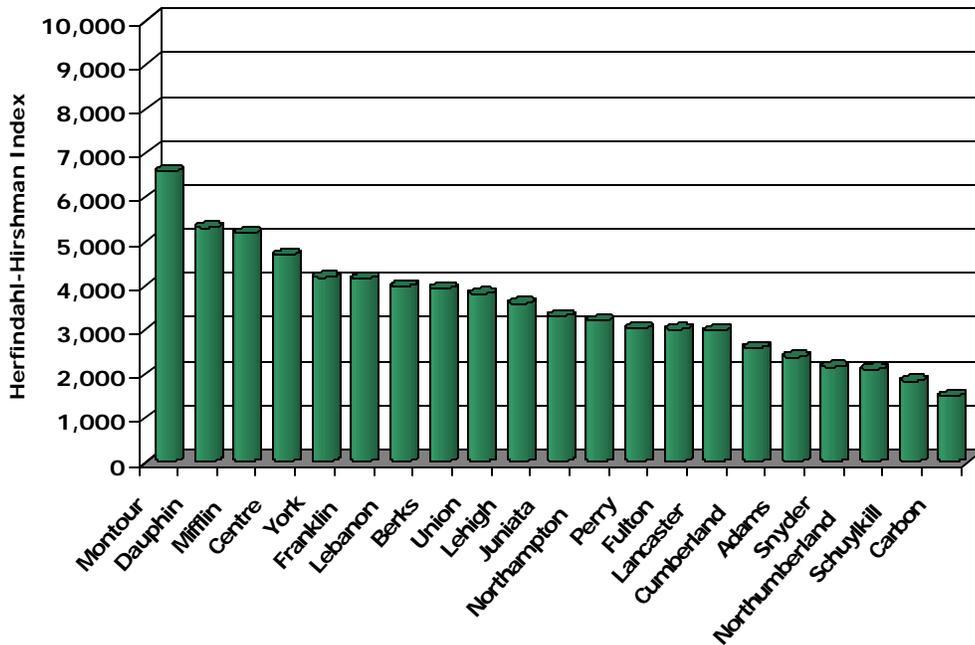


Figure 12
Northeast Pennsylvania County Hospital Markets - Concentration

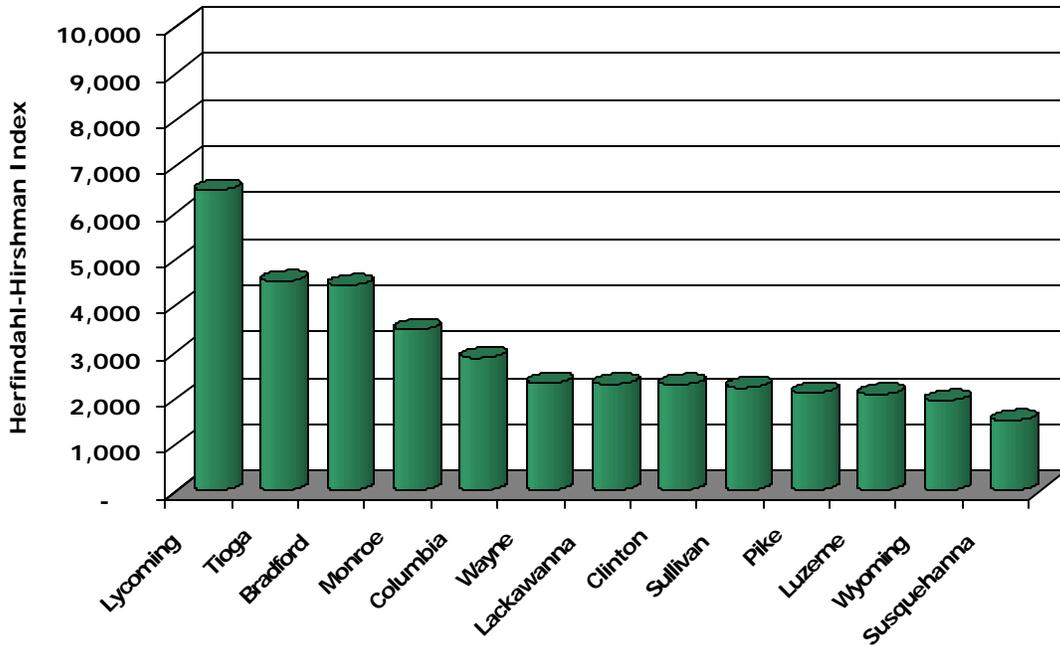
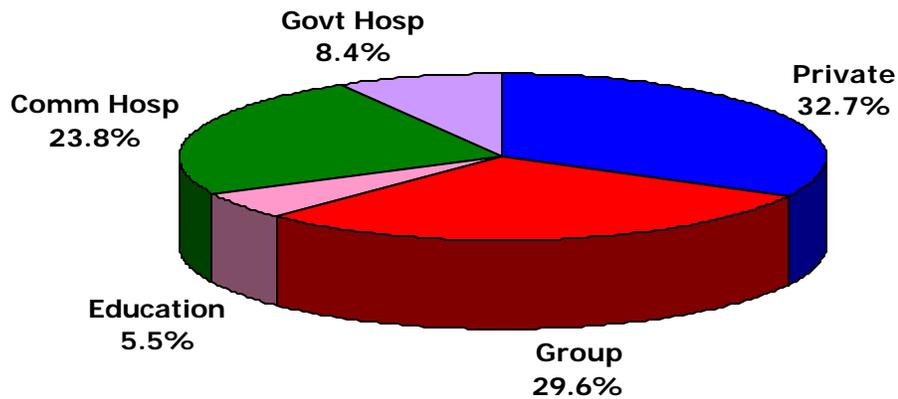


Figure 13
Distribution of U.S. Physicians by Type of Practice (2000)



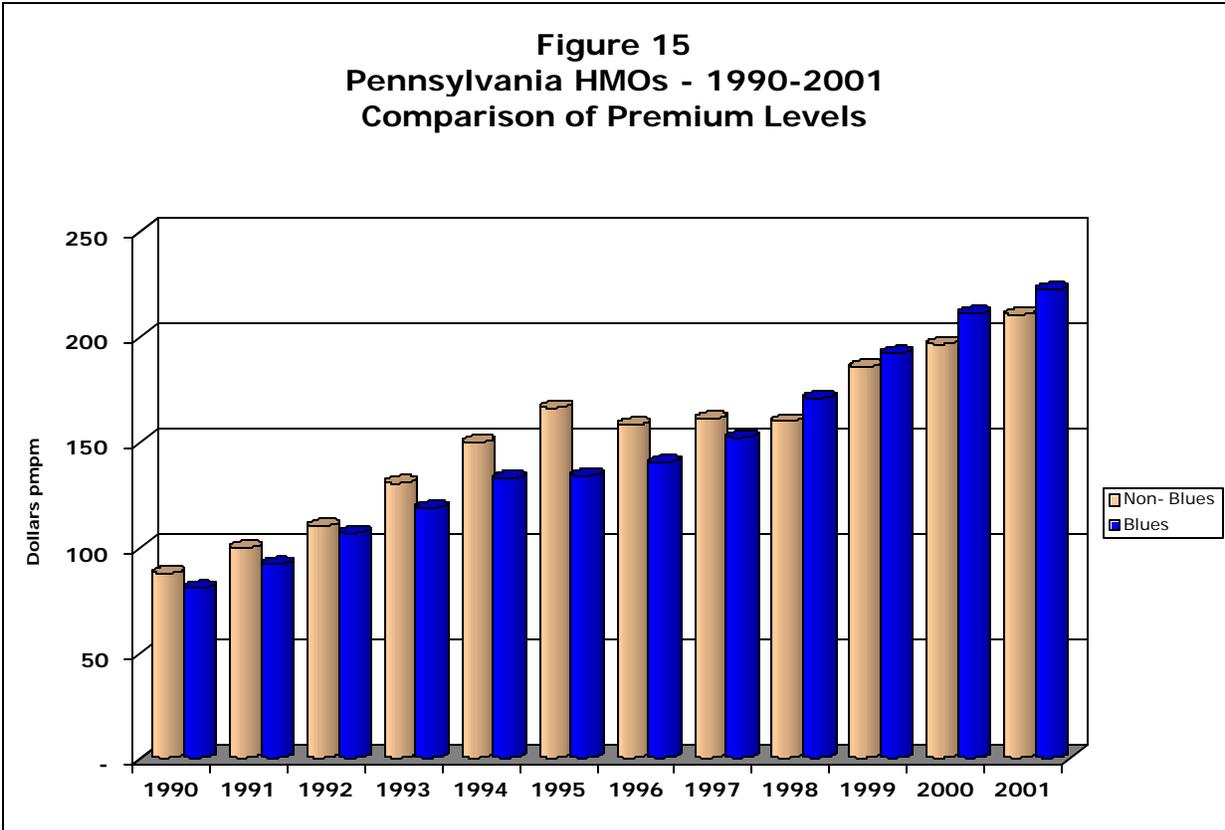
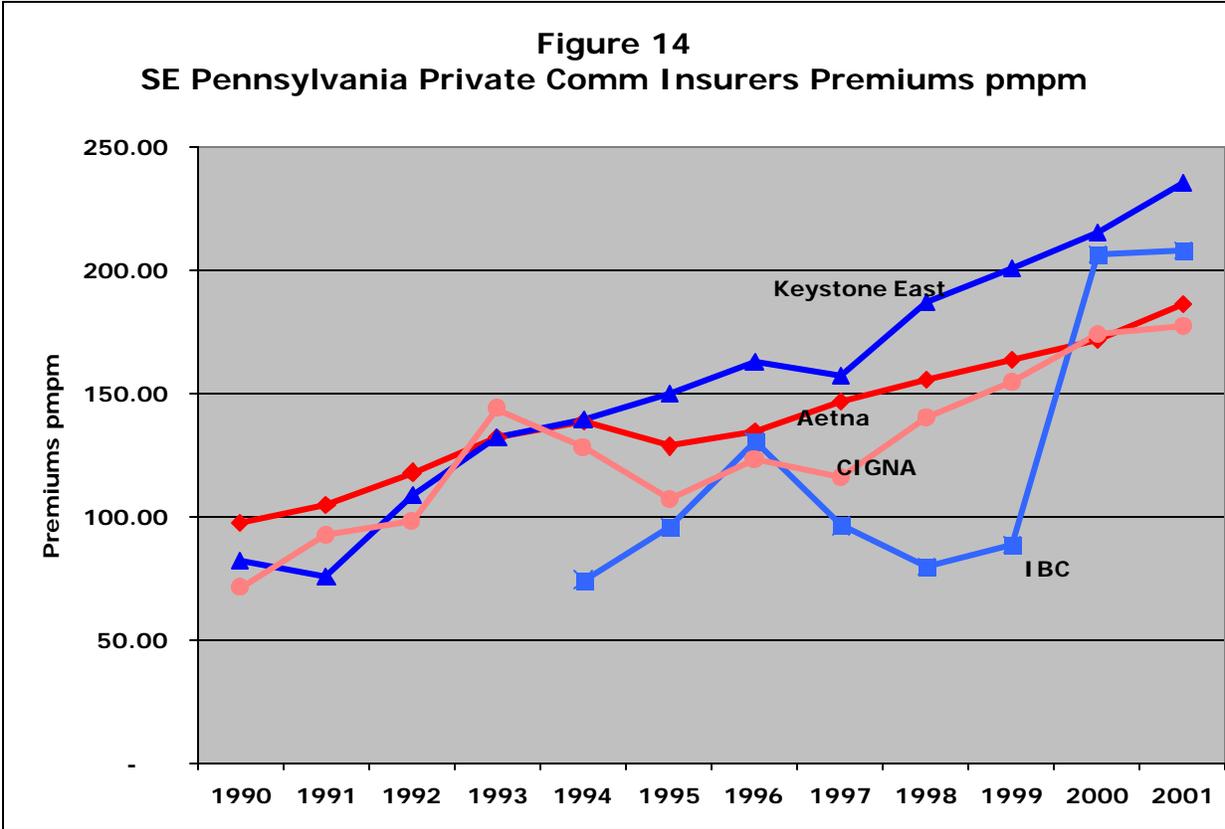


Figure 16
Southeast Pennsylvania Insurers' Net Incomes

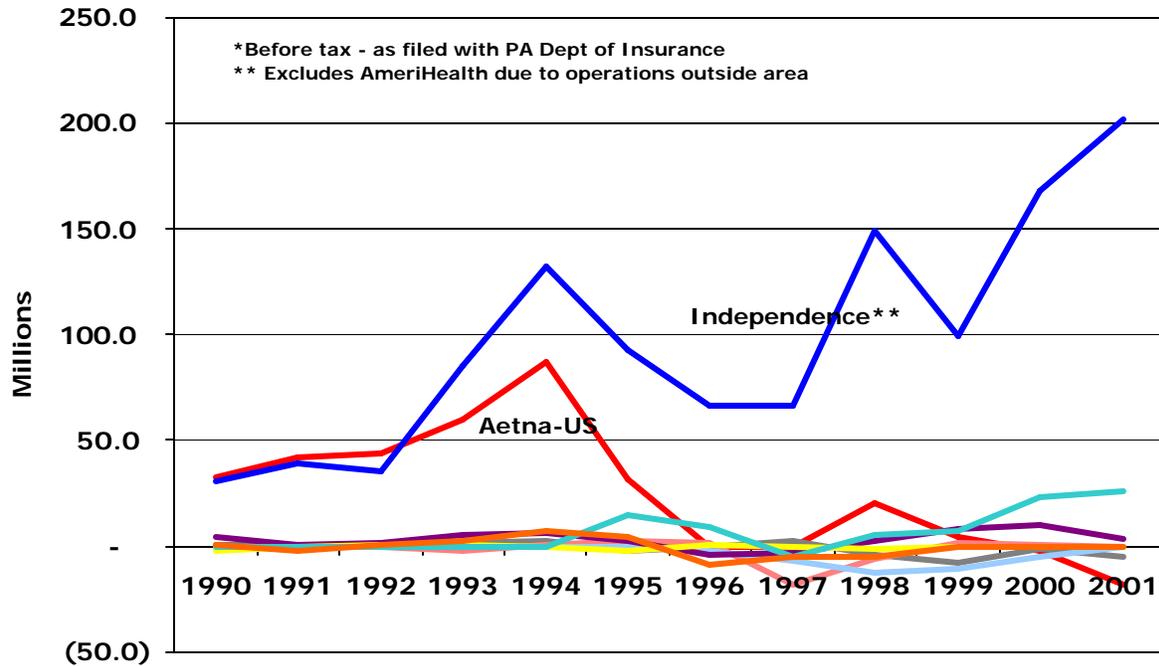


Figure 17
Western Pennsylvania Health Insurers - Total Profits*

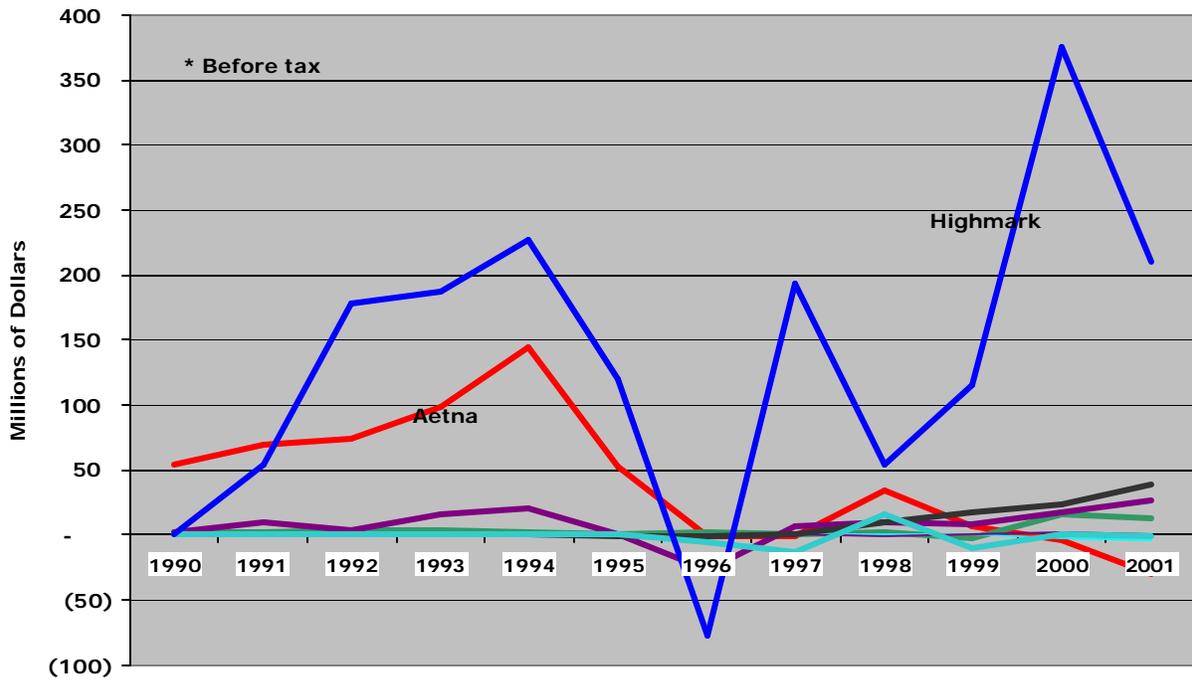


Figure 18
 Central Pennsylvania Health Insurers' Total Profits

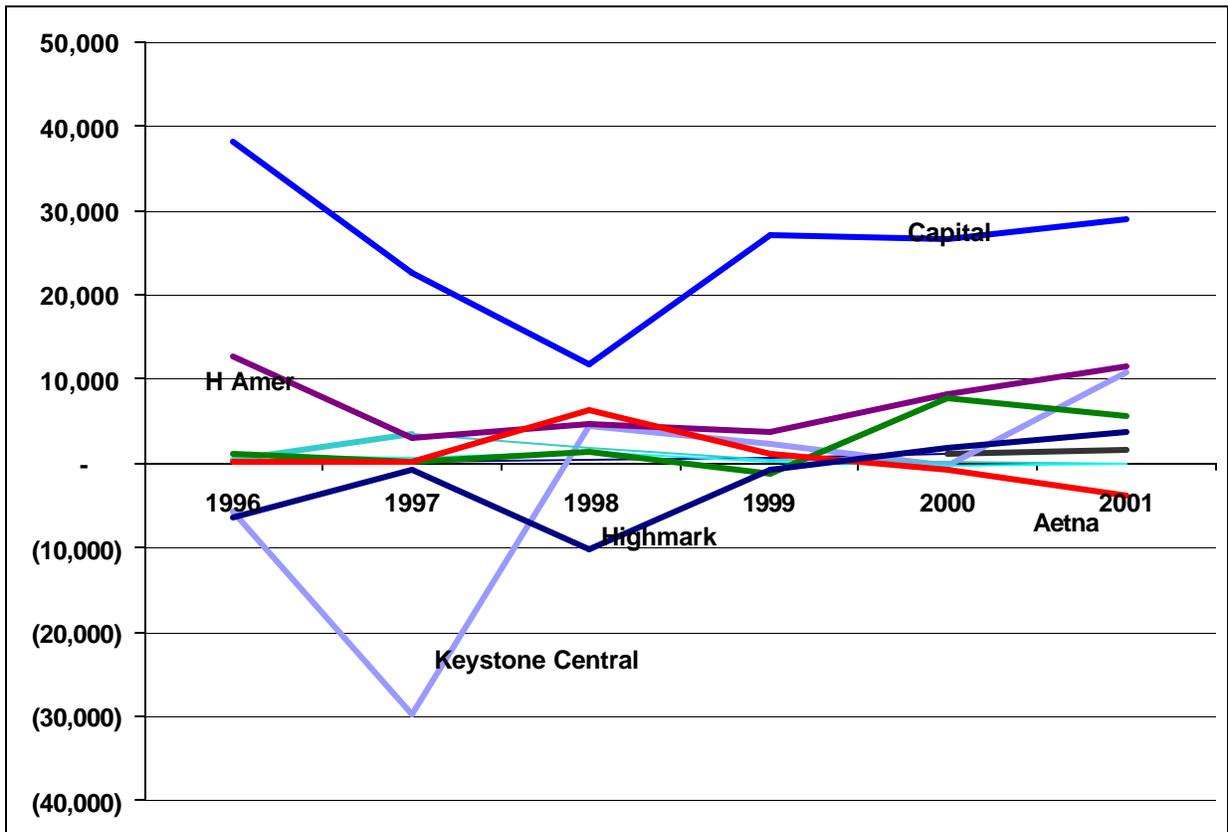


Figure 19
 Northeast Pennsylvania Health Insurers' Total Profits

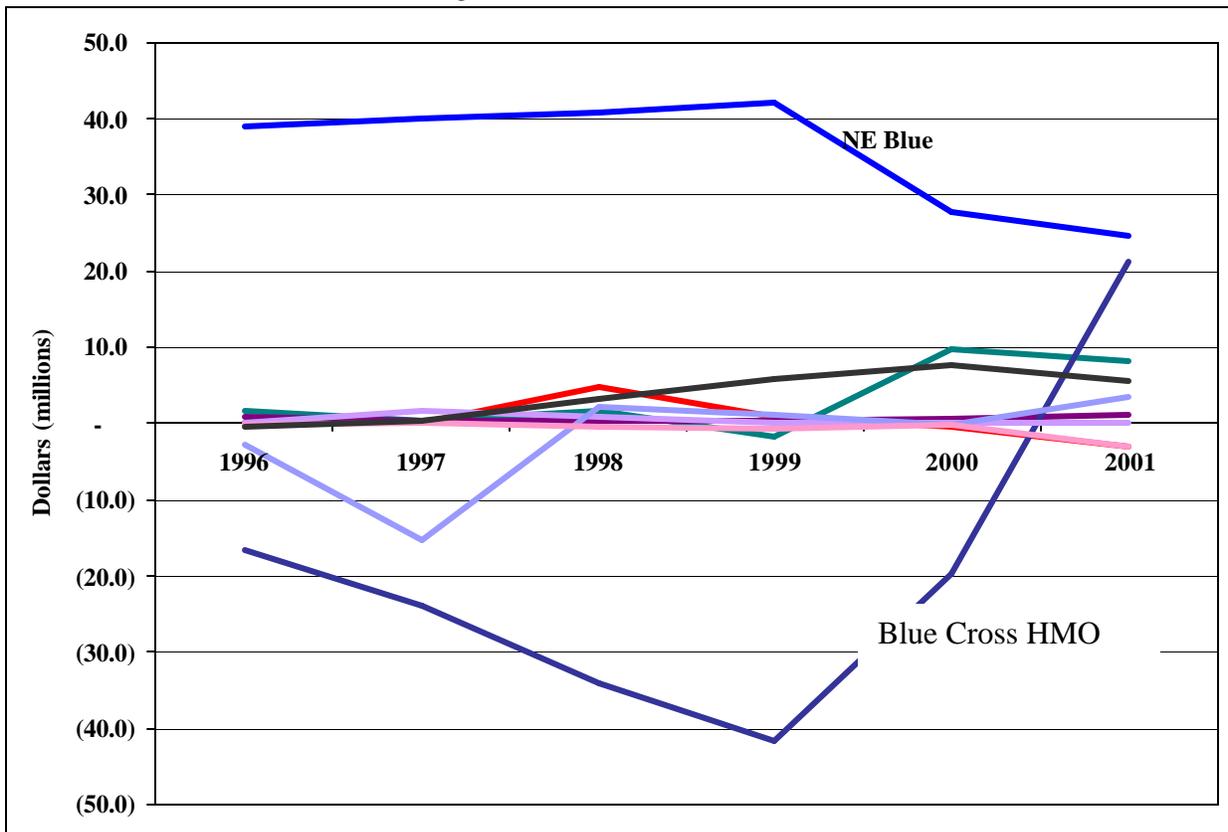


Figure 20

Pennsylvania Health Insurers' Net Incomes
 (Filed with Department of Insurance - Pre Tax)

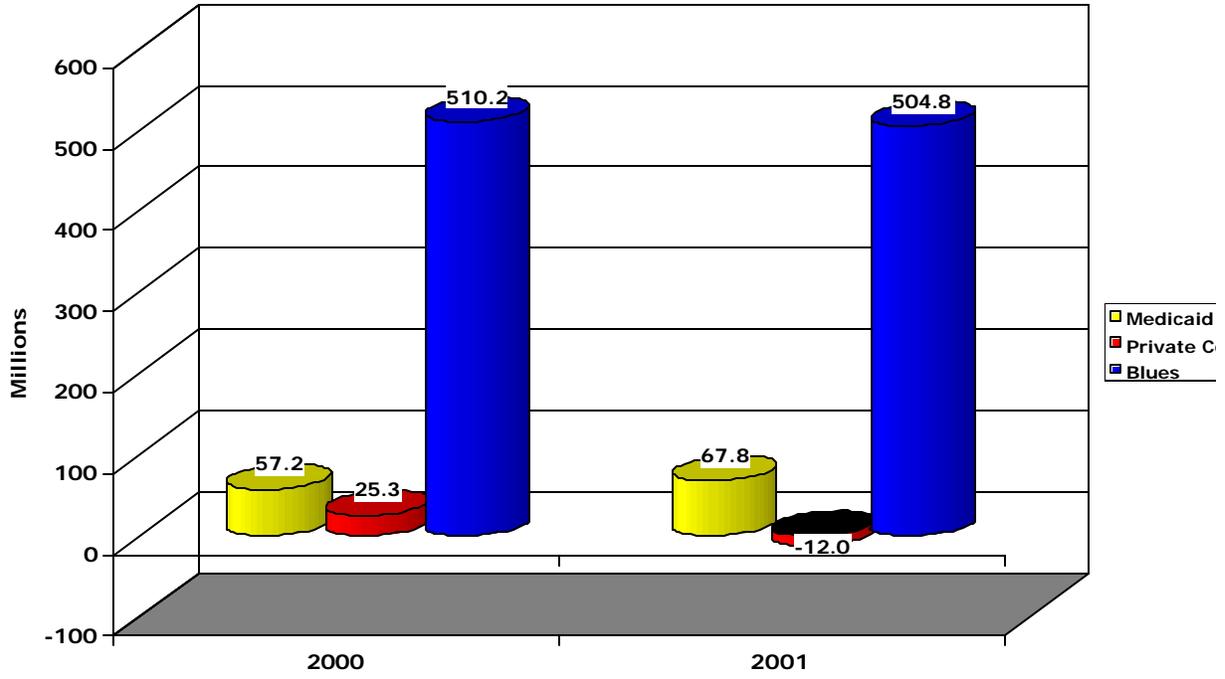


Figure 21

Health Insurers' Reserves
 (From Blues' Annual Reports & Others' Insurance Filings)

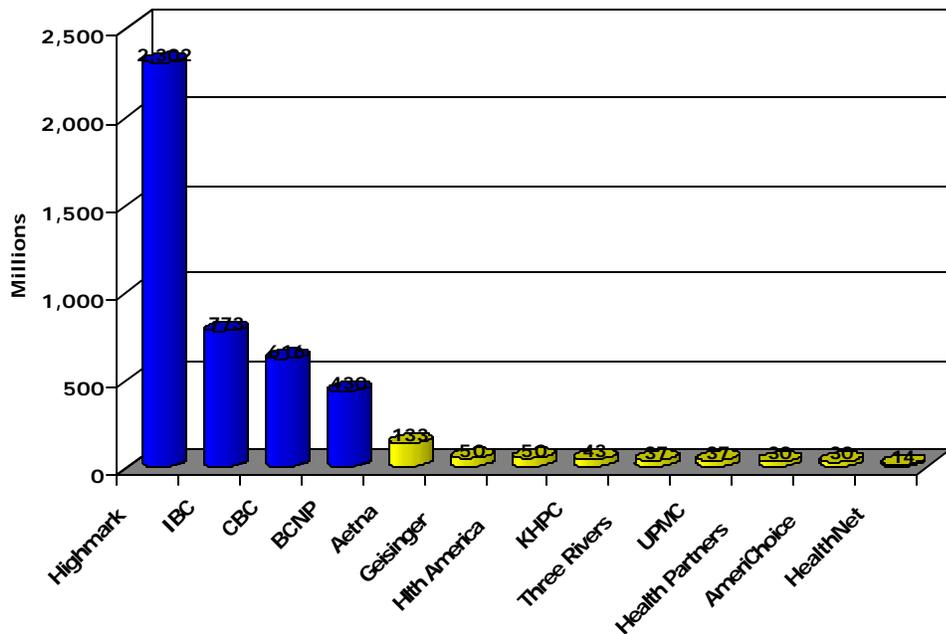


Figure 22
PA Hospitals Total Opng Margins - Totals by Region

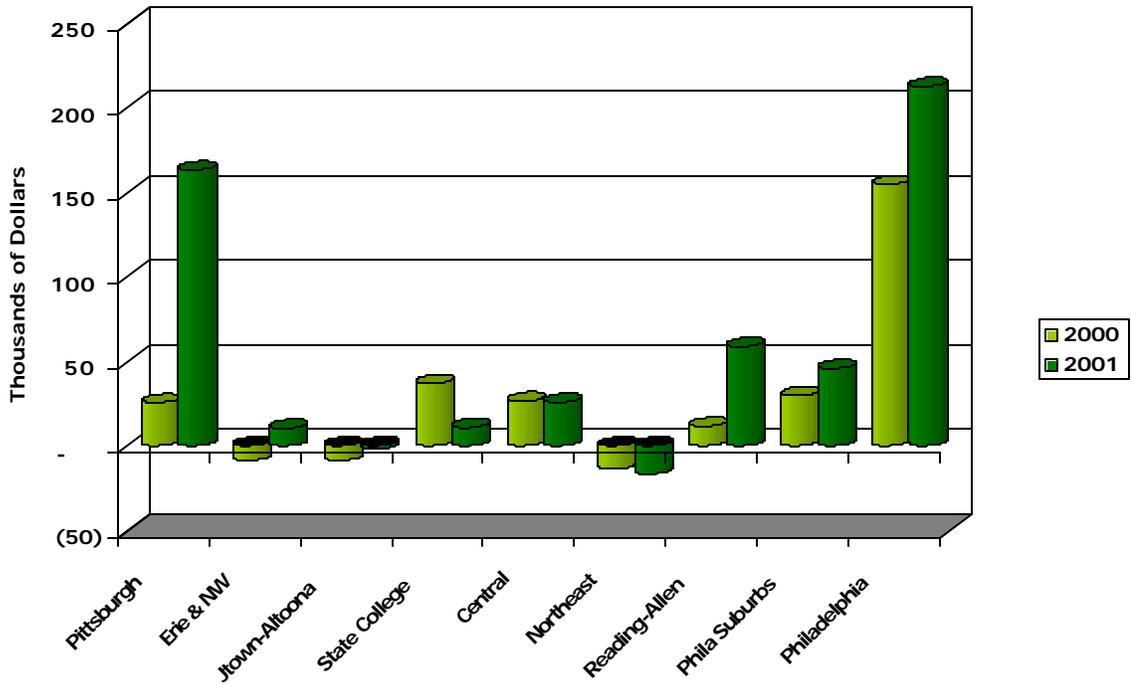
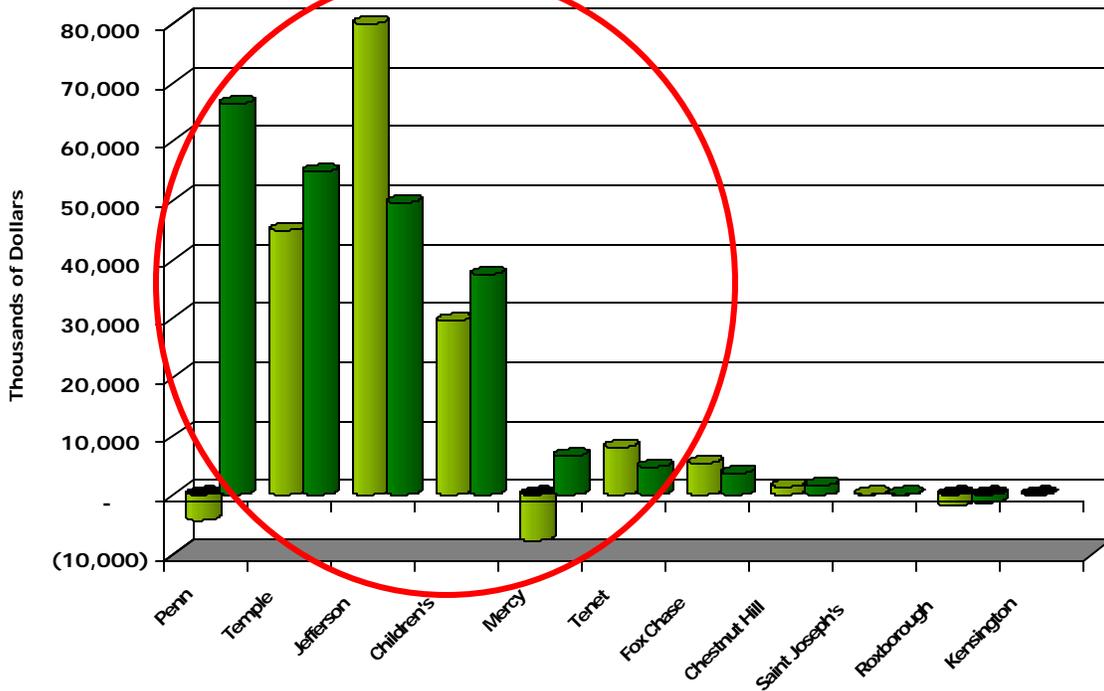


Figure 23
Southeast PA Hospitals Total Opng Margins



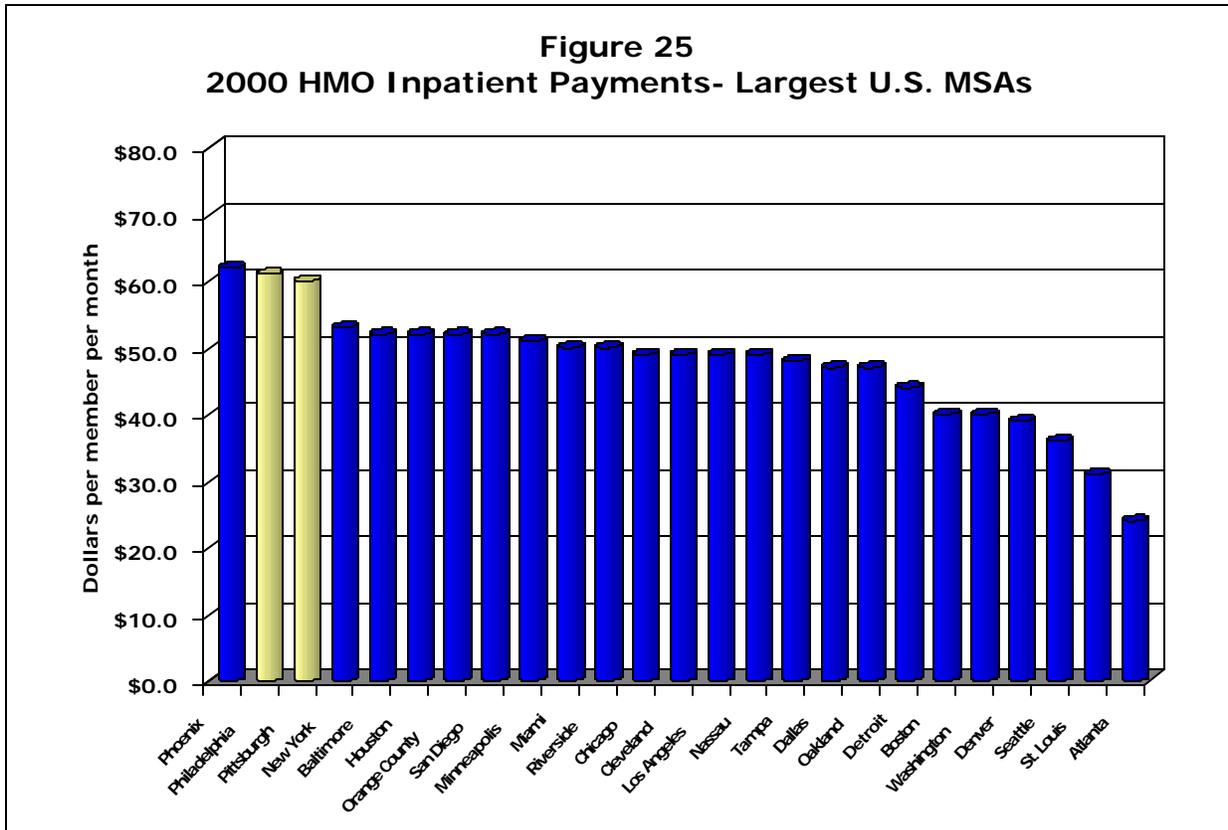
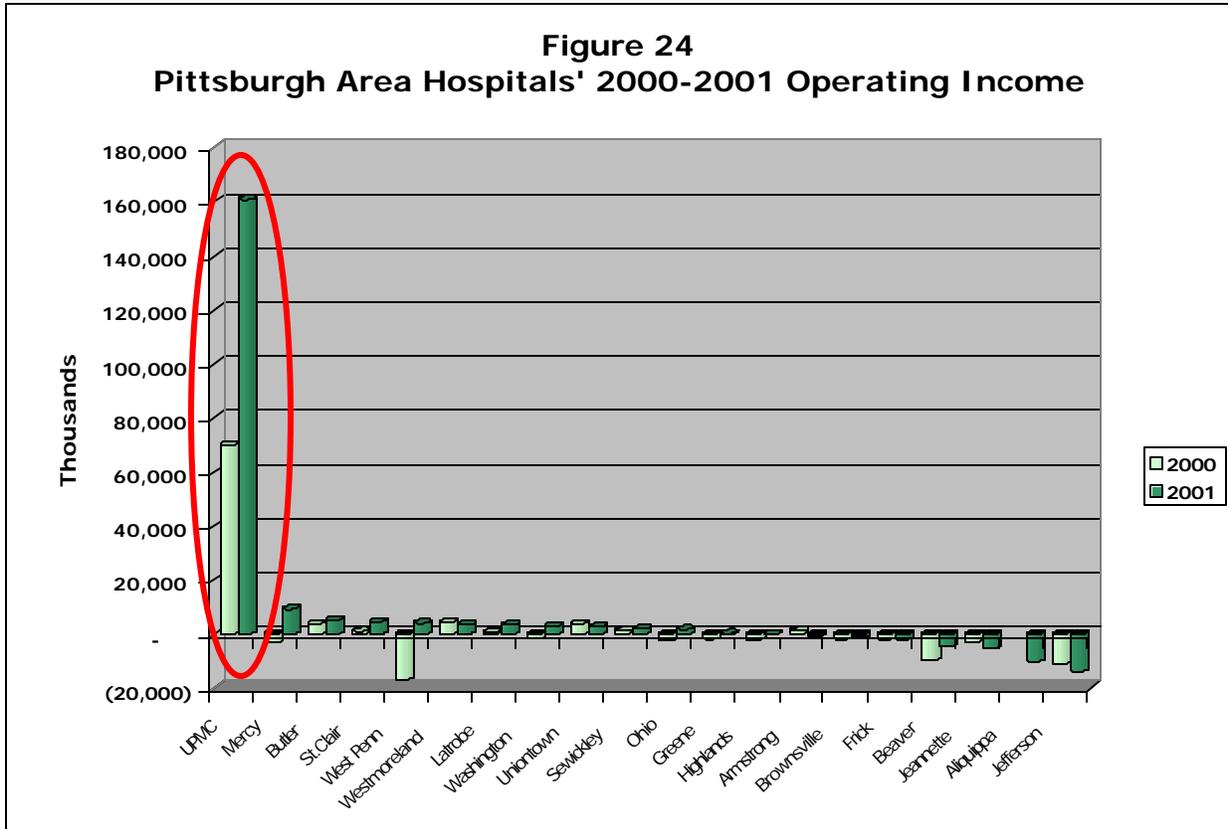


Figure 26
25 Largest U.S. MSAs HMO Payment to Physicians pmpm
With IBC Correction

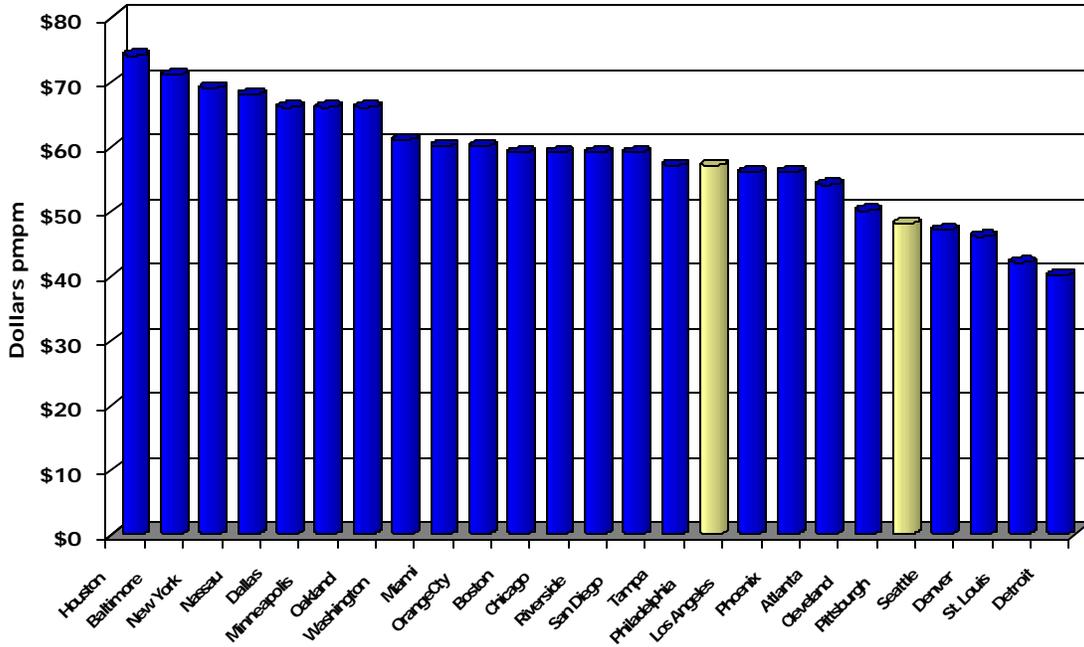
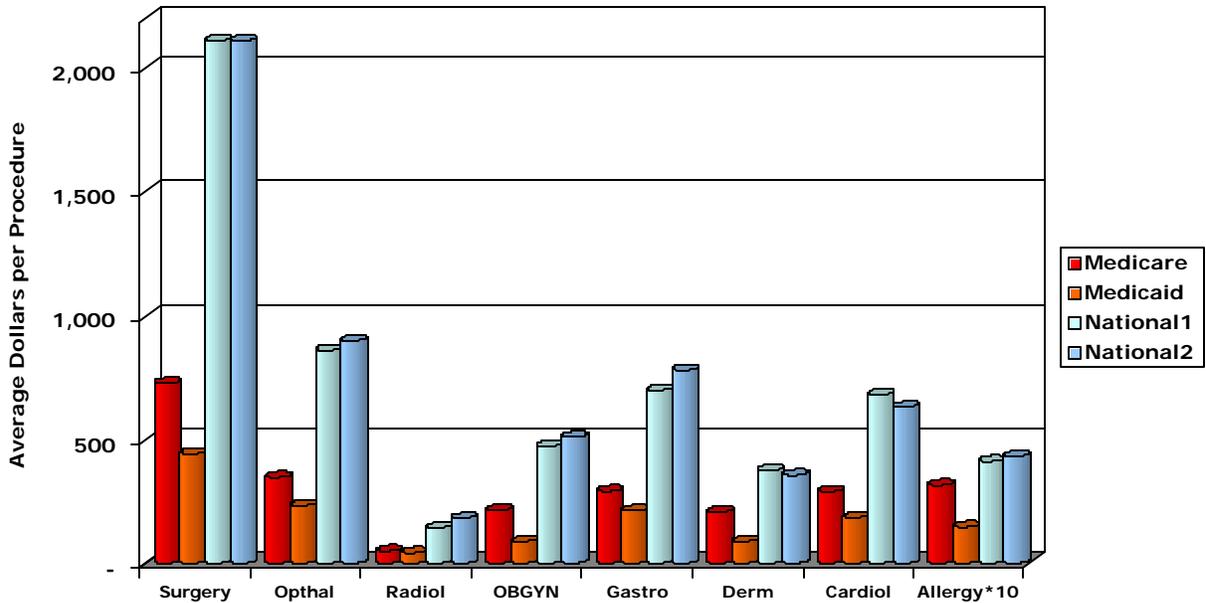


Figure 27
2002 Southeast Pa and National Averages
Per Procedure Payments for Selected Specialties



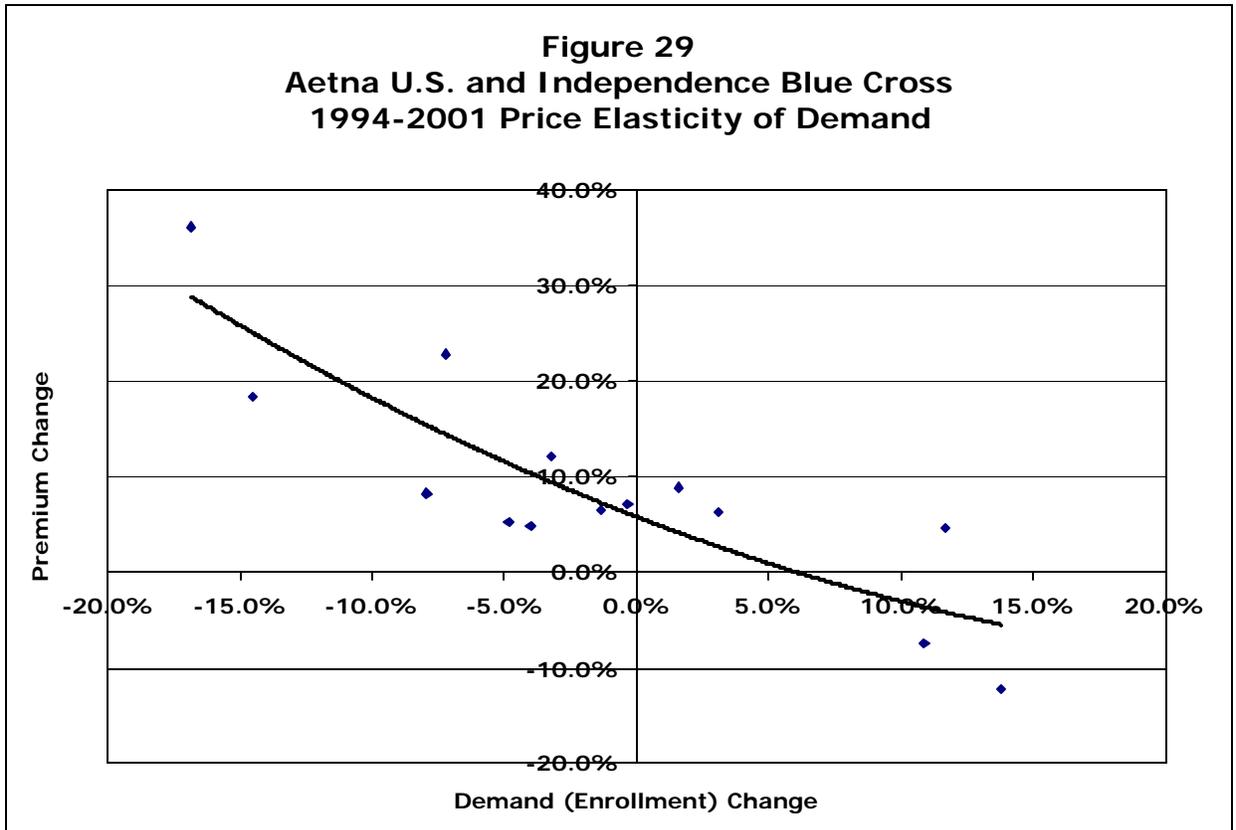
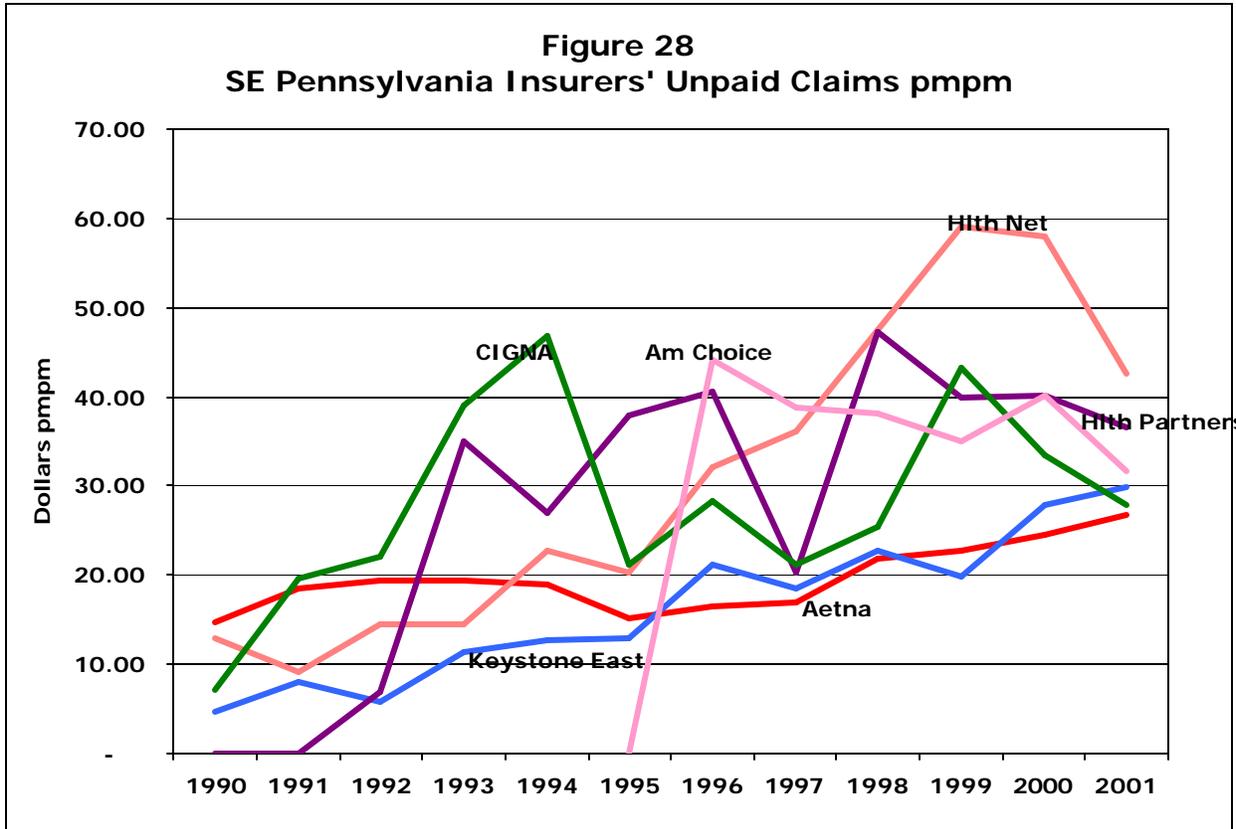


Figure 30
Unilateral Monopoly in Health Insurance

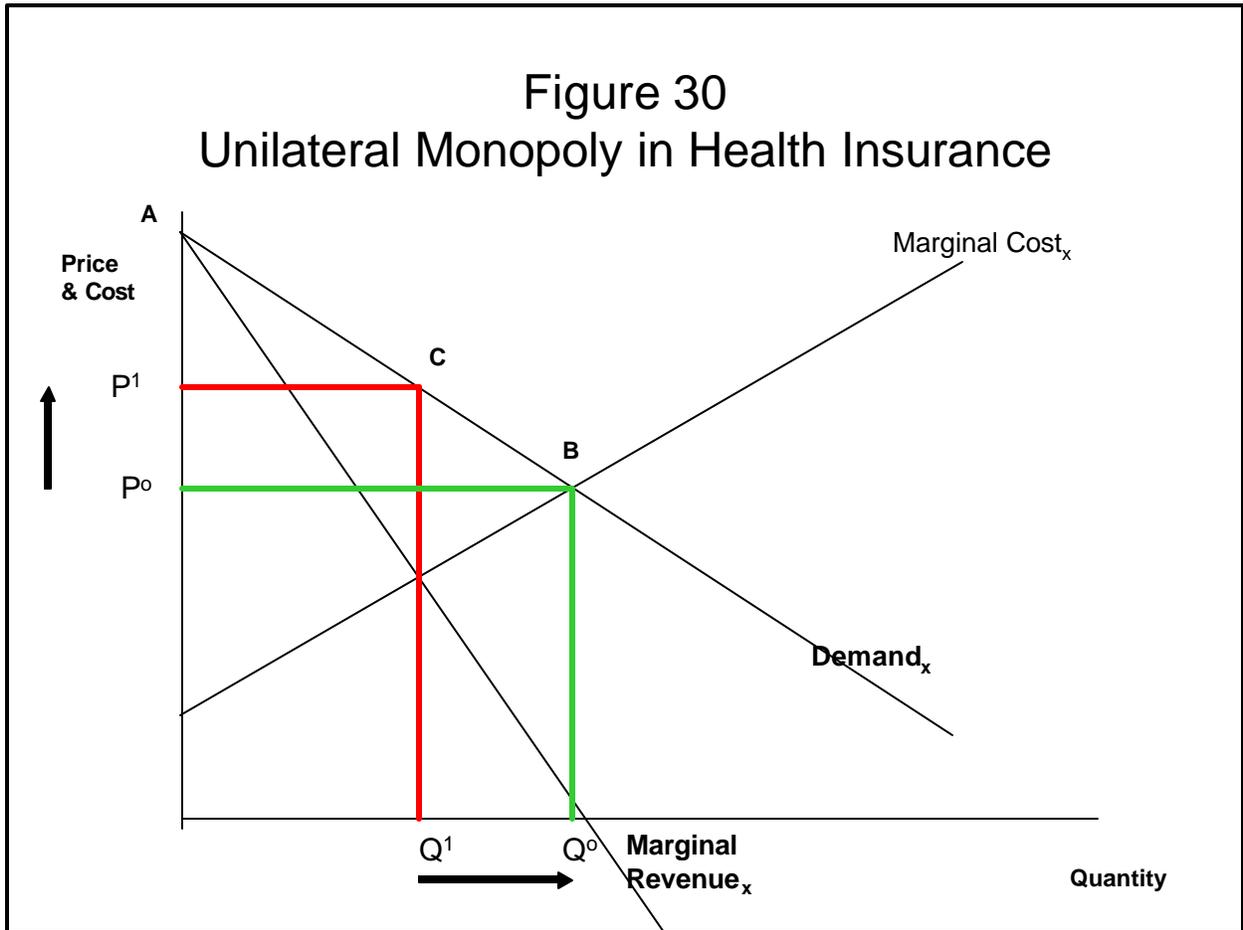


Figure 31
Countervailing Power in Health Insurance
– An Integrated Solution

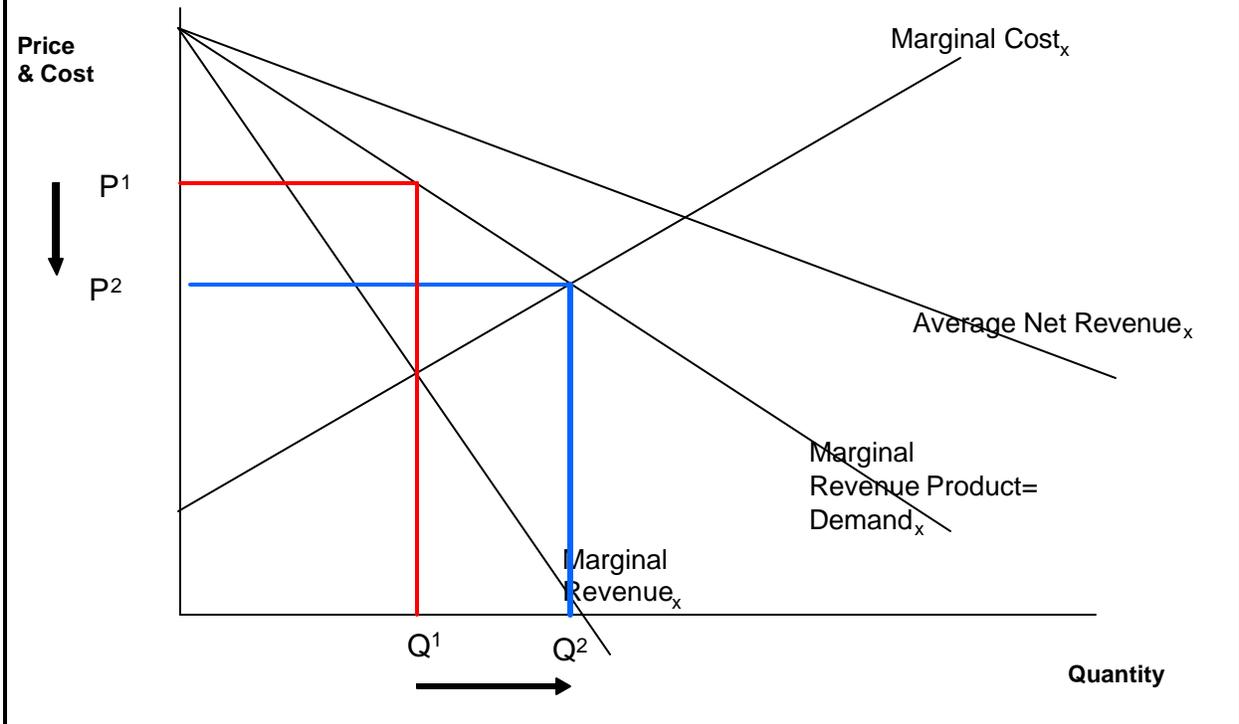


Figure 32
Countervailing Power in Health Insurance
– A Bargained Solution

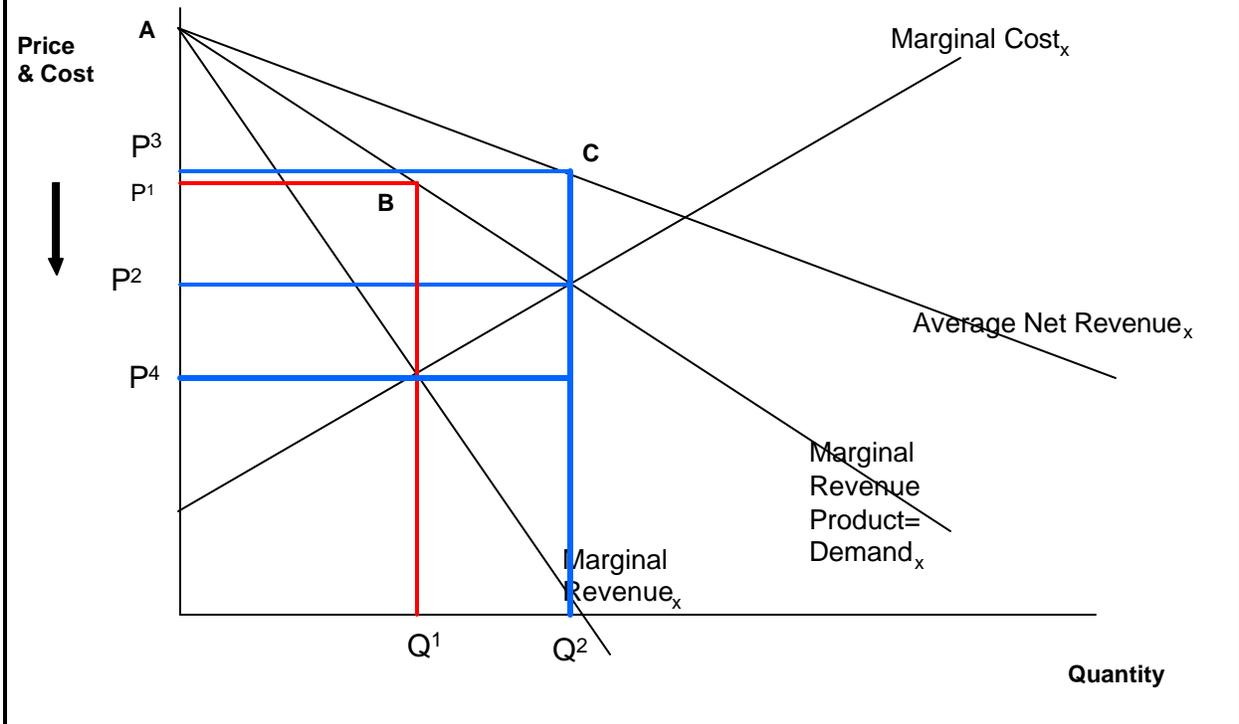


Figure 33
Unilateral Monopsony for Purchase of Medical Care

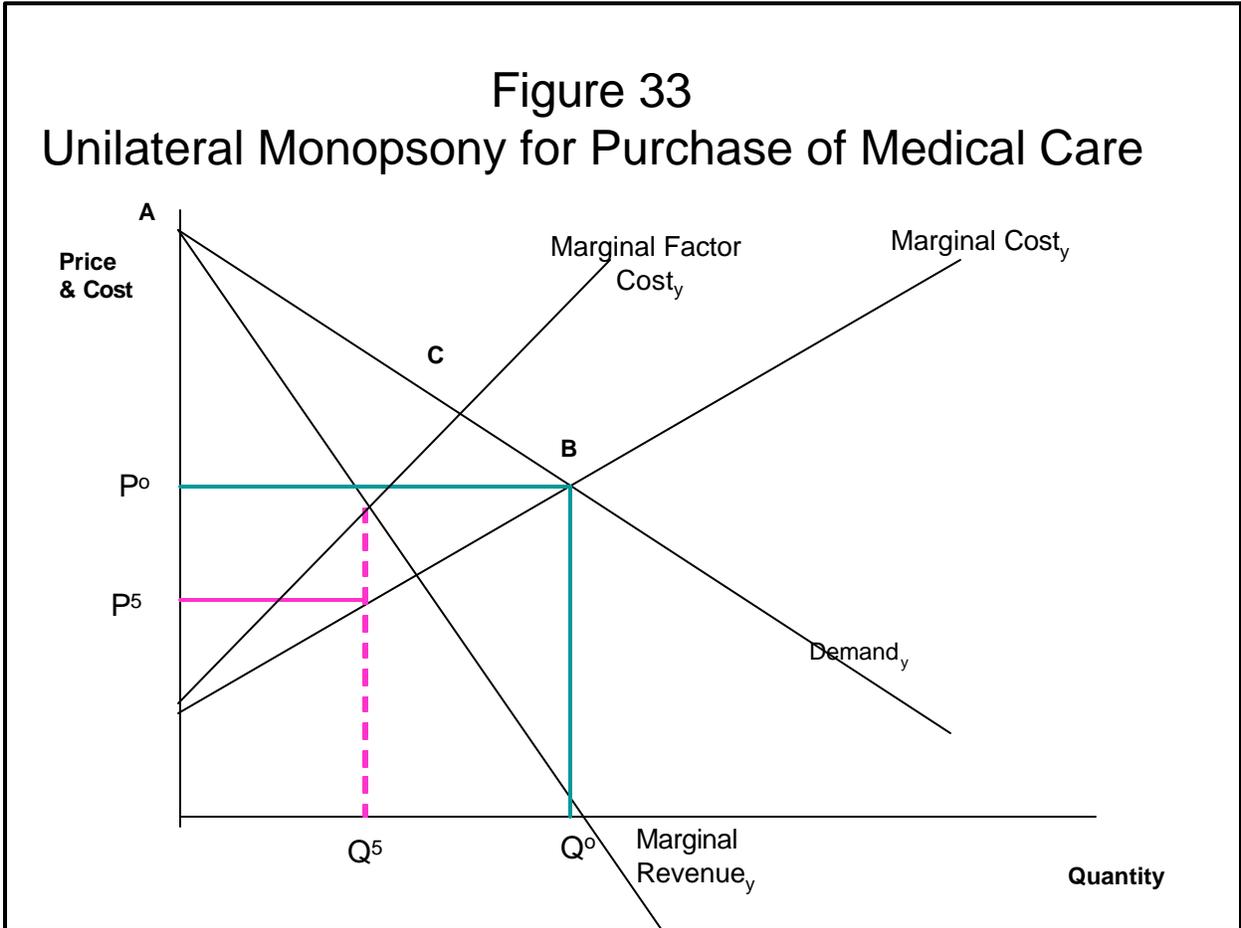


Figure 34
Countervailing Power in the Purchase of Medical Care
– A Bargained Solution

