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Does Shift Happen?

Key Concepts and Evidence in the Hospital Cost-Shifting Debate

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Private insurers often pay more to hospitals than public insurers like Medicare or Medicaid for the same services.[1] This leads some stakeholders to conclude that hospitals engage in "cost shifting," the notion that relatively lower public-sector payments cause hospitals to raise private prices to make up for losses.[2] Whether or not cost shifting occurs is key to accurately assessing the impact of policy or budget decisions that change provider payment levels by public insurers.

This review first looks at key definitions and conceptual issues important for understanding discussions around cost shifting. It then examines the empirical evidence of whether substantial cost shifting occurs. Key findings of the review include the following:

- There is little evidence of a strong and continuing potential for cost shifting by hospitals. The most recently published studies tend to find the opposite — that reductions in payments by public payers are associated with reductions in private prices.
- Hospitals do not appear to regularly have excess, unused market power at their disposal, which tends to leave them without the ability to cost shift.
- In response to public payment reductions, hospitals are more likely to reduce costs than engage in cost shifting. Such reductions may decrease quality of or access to care for patients.

Although this review focuses mainly on hospitals, it has implications relative to physicians and other health care providers.

Introduction

Private insurers often pay more to hospitals than public insurers like Medicare or Medicaid for the same services.[3] This and other similar observations lead some stakeholders to conclude that hospitals engage in "cost shifting," in which hospitals respond to relatively lower public-sector payments by raising private insurer prices to make up for losses.[4] Importantly, the notion of cost shifting entails not only that lower public prices and higher private prices are observed together, but also that the lower public prices caused the higher private prices and that further changes in public prices could be expected to induce offsetting changes in private prices.

Determining that cost shifting is occurring is not as straightforward as it may sometimes seem, and evidence for its existence has notable weaknesses. Although simultaneously observing lower public and higher private prices may appear to suggest cost shifting, it does not demonstrate that the cause of the higher private prices is lower payments from public insurers.[5] In addition, although some — often older — academic studies report evidence consistent with the existence of cost shifting, newer empirical studies, often carried out with stronger data and improved study designs, have not found evidence consistent with cost shifting.[6]

This report first reviews some of the conceptual issues important for understanding discussions of cost shifting. It then examines evidence on whether cost shifting occurs. It focuses mainly on hospitals but also has implications relative to physicians and other health care providers.

It is important for policymakers to understand the evidence about cost shifting.[7] With cost shifting, reductions in Medicaid or Medicare payments would increase the amounts paid by private insurers. What's more, higher private prices could raise the premiums paid for insurance by employers and, ultimately, by their workers, prompting concern for policymakers. In the absence of cost shifting, changes in public payments could have very different effects. The amounts paid by private payers would not change, but providers may have to respond to lower receipts from public payers through cost-cutting measures or other actions.

Market Power, Hospital Objectives, and Cost Shifting

One important focus of discussions about cost shifting concerns the conditions that must exist for it to occur. This often brings in questions about market power, private pricing methods, and hospital objectives.

Hospitals commonly have "list" prices for services but are not usually paid these prices by either public or private insurers. Unlike public payers, private insurers commonly negotiate with hospitals over whether the institution will be included in the insurer's network and, if so, the prices to be paid for services.[8]

Negotiations are often affected by the amount of market power held by the hospital (along with other factors, such as market power held by insurers).[9] Hospitals with little market power could lose too much business and not benefit if they try to raise prices above a baseline competitive market price. On the other hand, hospitals with market power may be able to negotiate for and benefit from prices above this level.

The amount of market power held by any given hospital can be a function of many things. Hospitals that private insurers would find more difficult to exclude from their network tend to have more market power. For example, insurers may hesitate to exclude hospitals that serve a large share of a local market with few nearby hospitals providing similar services for the insurer's members, or hospitals that are highly regarded or prestigious. On the other hand, hospitals for which there are multiple nearby competitors offering similar, and similarly regarded, services tend to have less market power.

If hospitals have little or no market power, the private prices they can negotiate tend to be constrained by their competitors and generally unable to vary much above the market price. In this situation, they would be unable to raise private prices to offset changes in public prices, and there would be no cost shifting. As hospitals gain market power, the potential for cost shifting increases.

When hospitals have some market power, which is not an uncommon occurrence, the key consideration for discussions about cost shifting becomes what they may be expected to do with it.[10] One possibility is that hospitals will seek to use it to their advantage in negotiations. Theoretical frameworks developed to study cost shifting commonly assume that a hospital will do just that by seeking to maximize the net revenue or profit it obtains from privately insured patients so that it can use the resulting resources to help achieve its overall goals.[11] Beyond providing high-quality care, hospital goals may include providing community benefits; serving publicly insured or uninsured patients at lower prices; investing in new equipment; or, in the case of for-profit hospitals, distributing profits to owners. The hospital can then further these goals by getting the best possible set of private prices.

Seeking to maximize net revenues or profits would not allow for cost shifting. If a hospital always seeks to take full advantage of whatever market power it has, it would have no further ability to benefit from increasing its private prices if public prices fall. Trying to raise private prices would either not work or be counterproductive to the interests of a hospital that already had private prices at the net revenue or profit-maximizing level.

For a hospital to cost shift in response to a public payment reduction, it must not already have been seeking its most desired private prices. Put another way, it must possess unused market power that it could have used to get better prices but elected not to use until the point at which public payments were reduced. Repeated cost shifting over time would require a reservoir of market power that was somehow not exhausted over time.

These theoretical frameworks also offer another observation. A hospital facing a fall in public prices might decide to seek to attract more private patients, which may generate more revenue. In most economic circumstances, this would require *reducing* private prices in order to get more private insurer contracts and patients. In this setting, hospitals would respond to a reduction in public payments with a *reduction* in private prices, which is the opposite of cost shifting.[12]

Since cost shifting does not appear possible for hospitals that seek to maximize net revenue or profits, some investigations have considered whether hospitals maximize revenue at all. One researcher argued that the complexity of many health care provider organizations may mean they do not maximize net revenues or profits.[13] Other analysis raises the possibility that hospitals seek to attain a goal or set of goals other than revenue or profit maximization. For example, if a hospital desires a high volume of privately insured patients to increase its "prestige," even when that would not maximize net revenue or profit, the theoretical opportunity for cost shifting arises.[14]

The overall takeaway of these analyses is that the circumstances in which cost shifting could occur are limited and involve adopting the perspective that hospitals do not seek to maximize their net revenues or profits from privately insured patients. Moreover, even if some market power was to be available at some point to support a cost shift, that ability is often finite and does not easily recur.

The Role of Hospital Costs

Hospital costs are also an important consideration in cost shifting. Hospitals provide the infrastructure, staffing, supplies, and other inputs needed to treat the patients in their facilities. Their costs can often be separated into fixed and variable categories. Fixed costs, such as the costs of buildings, equipment, or staff who are present regardless of patient volume, don't change with the number of patients. Variable costs, such as costs for supplies or meals consumed by patients, or staff whose presence varies with patient volume, do change with the number of patients.

Some costs are affected by decisions made by hospital leaders about the characteristics of the hospital, such as the extent and types of facilities, equipment, staffing, and other expenses. Costs can also be affected by external factors, such as market prices for supplies or wages. This means that two hospitals equally able to provide medically necessary care for a given patient may have very different cost structures, partly as a result of managerial decisions.

Conceptual arguments for cost shifting often incorporate assumptions about the choices hospitals face about their costs when they encounter a

reduction in revenue from public payers. In some discussions, there is a presumption that hospital costs cannot be adjusted: A hospital must incur some cost to operate and take adequate care of patients, and this cannot be changed. This can give rise to the argument that hospitals have no choice but to raise private prices — to cost shift — in response to reductions in public payments if they are to avoid going out of business.[15]

On the other hand, if at least some hospital costs are under the control of hospital leaders, then hospitals do, in fact, have another choice: They may reduce their costs.[16] In this case, private price increases are not an inevitable response to declining revenue from public payers. Making changes to the operations of a hospital to reduce costs may have other implications for the hospital, its staff, or its patients, which would be important to consider.

Empirical Evidence on Hospital Cost Shifting

A body of literature looks at the existence and importance of cost shifting in practice and considers alternative potential effects of changes in public payments. Important groups of findings from this literature are briefly summarized below.

The Existence of Price Discrimination and Cross-Subsidization

Prices paid by private insurers often exceed those paid by public payers. For example, in one analysis, prices paid by private insurers to hospitals exceeded those paid by Medicare by more than 250%.[17] While this may look like cost shifting at first glance, it does not itself show that cost shifting is occurring because it does not show that the lower public prices caused the higher prices. Rather, this is evidence of what economists refer to as price discrimination, in which different prices are paid by different buyers of a good. Price discrimination is observed in many situations where prices for goods or services are set separately for different buyers, and while price discrimination is necessary for cost shifting to occur, it can happen without cost shifting.[18]

Similarly, it is sometimes observed that revenue from the care of privately insured patients often covers more than their share of the hospital's total costs, and revenue from the care of publicly insured patients covers less than their share. For example, the American Hospital Association (AHA) has reported an estimate of payment-to-cost ratios for hospitals separately for Medicare, Medicaid, and commercial payers. The measures they report are the ratio of the payments received for patients in each given group to an overall measure of the average cost the hospital incurs to care for its patients. In 2018, the AHA reported that the average payment-to-cost ratio for community hospitals was 144.8% for private payers, compared to 89.3% for Medicaid and 86.6% for Medicare.[19] Like price discrimination, this may look like cost shifting, but this is more properly referred to as cross-subsidization, and it can arise in many situations in which revenues or costs are determined separately for different groups even when there is no cost shifting.

Patterns Over Time in Hospital Margins

Patterns observed over time in reported hospital margins can appear consistent with cost shifting. For example, the AHA has reported payment-to-cost ratios annually for many years for community hospitals, and these have been frequently referenced in cost-shifting studies.[20] Figure 1 shows some periods in which the reported payment-to-cost ratios for privately insured patients were rising at the same time that ratios for publicly insured patients were falling, or vice versa. Such periods of

"negative correlation" are particularly apparent in the 1980s, 1990s, and early 2000s, though after this period the consistency of the pattern wanes.

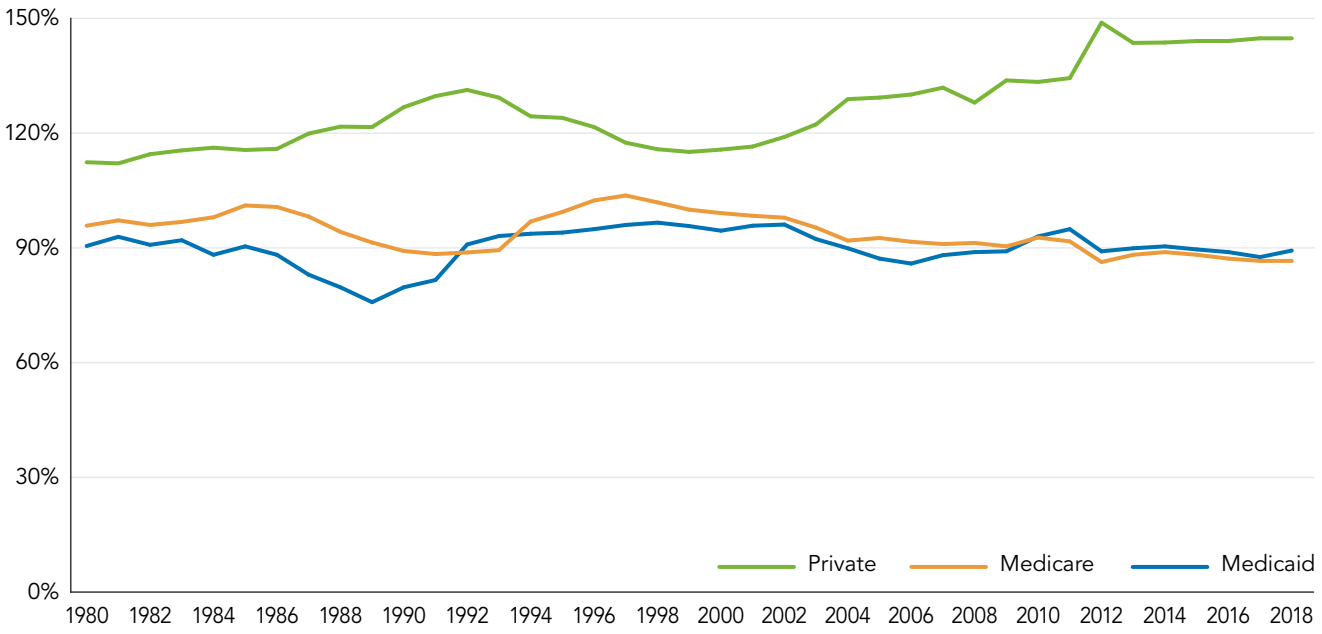
Some studies have used these kinds of trends to argue for the existence of cost shifting, at least for some periods. For example, researchers in one study reviewed variations in payment-to-cost ratios for public and private payers and analyzed state-level correlations between public and private payment-to-cost ratios.[21] They found that higher margins for private payers were associated with lower margins for public payers and uninsured patients and concluded that this relationship indicates cost shifting.[22]

Other studies offer criticism of these conclusions. One study notes factors other than cost shifting that could cause the trends in payment-to-cost ratios.[23] For example, it argues that between about 1992 and 1997, the rise of selective contracting drove down private prices at hospitals, while hospital cost growth independently slowed, raising payment-to-cost ratios for Medicare and Medicaid. These two separately acting factors — rather than cost shifting — helped explain the negative correlation. This study also argues that between 1997 and about 2008, managed care backlash reduced the market power of insurers relative to hospitals, increasing private payment-to-cost ratios at the same time the Balanced Budget Act of 1997 reduced Medicare payments. This could be a possible reason for the negative correlation during this era that is different from cost shifting.

Other researchers have pointed out another plausible explanation for the observed pattern of negative correlation, which is that hospitals can gain market power from a variety of sources, such as hospital consolidation.[24] Hospitals that gain market power may use it to negotiate increased payments from private payers, which would tend to increase the total revenue of the hospital. They may, in turn, use the increased resources to make fixed-cost-increasing changes to hospital operations, such as increasing staffing, expanding service lines, adding patient amenities like larger or renovated rooms, or increasing capital expenditures. Such changes might make the hospital more attractive, benefit patients or staff, and help it maintain or improve its market share. But they also increase its overall cost of operations for all patients, whether they are covered by private or public payers.

If this happens, payment-to-cost ratios for public payers will tend to decline; if payments remain stable, the increase in costs will reduce the ratio. But at the same time, ratios for private payers will tend to increase as the payment rates from private payers rise even relative to the increase in costs that is spread over all patients. This may produce the observed negative correlations but would not indicate cost shifting. The same authors also found that hospitals with larger apparent Medicare losses had higher costs per discharge and were not less profitable overall than hospitals without Medicare losses, which is consistent with the explanation they offer.

Figure 1. Aggregate Community Hospital Payment-to-Cost Ratios for Private Payers, Medicare, and Medicaid



Source: *Trendwatch Chartbook 2022: Trends Affecting Hospitals and Health Systems* (PDF), American Hospital Association, October 2023.

Private Payment Responses to Negative Financial Events

Many studies have analyzed how negative financial events, such as reductions in public prices, are associated with hospital actions, and these can often provide evidence about cost shifting.[25]

One study looked at changes in Medicare payments to hospitals induced by changes in Medicare policies from 1995 to 2009 that led hospitals in some areas to have faster growth in Medicare payments than hospitals in others.[26] The study found that areas with slow growth in Medicare payment rates also had *slower* growth in private prices, contrary to the theory of cost shifting. This researcher posits that hospitals may have reduced their operating costs or negotiated for lower private prices to attempt to increase demand from privately insured patients.

Another study examined hospitals' responses to reductions in Medicare payments between 1996 and 2009.[27] The authors found that lower Medicare payments were associated with reductions in hospital revenues beyond what could be accounted for by Medicare payments alone. This is consistent with hospitals responding to lower Medicare payments with lower private prices and is the opposite of cost shifting. They also found that the hospitals offset the revenue reductions one-for-one with reductions in operating costs so that their net revenues or profits were not changed, which the authors also interpreted as inconsistent with the existence of cost shifting.

A third study examined a Medicaid expansion that shifted a set of patients with disabilities from private insurance to Medicaid, effectively reducing the amounts hospitals were paid to care for them. Under the theory of cost shifting, hospitals would be expected to respond by raising private prices. In fact, this researcher found that private charges fell.[28] It should be noted that the study looked at charges rather than amounts actually paid, though the author argues that charges may still be informative.

A fourth study examined the effect of the stock market crash of 2008, which likely stressed hospitals' endowments.[29] If cost shifting, a natural response of stressed hospitals would be to raise private prices to make up for losses. But this study found no overall evidence of higher prices consistent with cost shifting (although a small subset of hospitals — likely those with substantial market power — did appear to raise private prices). The study also found that hospitals did appear to reduce some costs and services.

Finally, a paper analyzed responses of Florida hospitals to Medicare rate cuts between 1997 and 2008. It found that public rates cuts were associated with an increase in privately insured patient volume, which is inconsistent with cost shifting since private price increases would tend to reduce private volume.[30]

Earlier Research

There is a substantial body of earlier research on cost shifting. One researcher reviewed and synthesized results from a number of studies, including three that examined changes in Medicare or Medicaid payments and private revenue primarily in the 1990s, which found mixed evidence on cost shifting.[31] These papers tended to find that the degree of competition in hospital and insurer markets was associated with the potential for cost shifting. The review also considered three papers that looked at changes in Medicare or Medicaid rates primarily in the 1980s. All found at least some evidence consistent with cost shifting in the 1980s and tended to show a greater degree of cost shifting than the studies focused on the later period. These studies also tended to find that cost shifting declined with the competitiveness of the insurance market and the rise of health maintenance organizations (HMOs). Overall, the review showed that the strongest evidence for cost shifting came from the experience of the 1980s, and that the potential for cost shifting had declined over time.

Earlier studies tended to find that cost shifting declined with the competitiveness of the insurance market and the rise of HMOs.

Two earlier studies are also consistent with cost shifting. Data from a survey of hospitals in 1979 were examined, and indirect evidence was found that increases in discounts given to Blue Cross may have been associated with increased prices for other payers.[32] Another study looked at how hospitals in Illinois responded to reductions in state Medicaid payments in the early 1980s and revealed evidence consistent with cost shifting of a negative correlation between changes in Medicaid payments and private insurer prices.[33]

On the other hand, other studies during this period reported at best mixed evidence for cost shifting. One looked at changes in the amount of financial pressure facing 128 hospitals between 1980 and 1982 and concluded that hospitals reduced costs but did not cost shift.[34] A researcher who also studied this period, with a different sample of hospitals, did not find strong evidence for a correlation between the amount of financial need faced by a hospital and private payer markups.[35] Writing in 1993, another researcher concluded that the literature up to that point "present[ed] a mixed picture of dynamic cost shifting" and noted that although some studies did show a potential for cost shifting, no studies had indicated that hospitals could fully offset public price reductions through private price increases, while some studies reported little evidence for any cost shifting at all.[36]

Alternative Responses to Financial Stress

If hospitals do not cost shift in response to reductions in public payments, they may take other actions to maintain their solvency. One researcher identified several strategies: reducing staffing or wages, changing capacity or service offerings, changing quality, slowing the adoption of new technologies, closing or merging, upcoding diagnostic information to get higher payments from Medicare, or changing the relative payer mix (which may entail changing private prices).[37]

A large body of literature considers these possible actions, with several papers having found links between public payments and lower intensity of services.[38]

Researchers in another study examined the effects of changes in Medicare payments on nurse staffing in hospitals and reported evidence suggesting that reduced Medicare payments were associated with lower nurse staffing, particularly at non-safety-net hospitals.[39] A 2005 study reported that hospitals responded to changes in Medicare payments by shifting coding of patients toward diagnosis codes with the largest price increases.[40] An earlier study from 1987 reported that hospitals responded to the reimbursement changes from the implementation of the Medicare prospective payment system by reducing patient length of stay.[41] The authors of another study showed that a cut in Medicaid payments led to reduced service levels at hospitals.[42]

More recently, a researcher looked at the decidedly uneven experiences across hospitals during the COVID-19 pandemic.[43] Hospitals serving larger shares of less wealthy patients faced more challenges than those serving smaller shares. This researcher offered the insight that during this stressful period, hospitals serving large numbers of publicly insured or uninsured patients were apparently not able to cost shift.

A 2021 study examined the idea that financial stress caused by reductions in public payments could lead hospitals to close or merge, thereby increasing the market power of the remaining hospitals, which they might use to negotiate for higher private prices.[44] Between 2010 and 2016, the study shows, hospitals with higher shares of Medicare patients faced a higher likelihood of closure or acquisition than other hospitals, raising the possibility that private prices could be raised.

Conclusion

This review of the literature leads to several conclusions.

- There is little evidence of a strong and continuing potential for cost shifting by hospitals. The most recently published studies tend to find the opposite — that reductions in prices by public payers are associated with reductions in private prices.
- It is not clear that hospitals would regularly have at their disposal excess, unused ability to obtain higher prices from private insurers, which would tend to leave them without the ability to cost shift in response to changes in payment rates by public payers.
- In response to public price reductions, hospitals are more likely to reduce costs than to engage in cost shifting. Such reductions may decrease the quality or access to care for patients.

Although most of the cost-shifting literature and discussion have focused on hospitals, questions about cost shifting can also arise in other contexts, such as physician services or pharmaceutical products.

For example, private payer groups have recently argued that ongoing attempts to reduce Medicare payments for prescription drugs would cause a cost shift to private insurers.[45] However, for cost shifting to occur, the entities doing the shifting must possess market power that they have not yet exercised.[46] In any case, there is little or no evidence testing the existence (or not) of cost shifting in these markets.

With respect to hospitals, the view that there is unlikely to be widespread cost shifting has gained support, including in commentary by prominent observers of cost-shifting literature and some state health policy organizations, including the Vermont Green Mountain Care Board and the Colorado Health Institute.[47]

If cost shifting is not widespread or substantial, policymakers should not expect that changes in public payments will substantially affect private prices or premiums for private insurance. They should also not assume that changes to public payments will be benign for providers in that they will be directly offset by private insurer payments.

In response to public payment reductions, hospitals are more likely to reduce costs than to engage in cost shifting. Such reductions may decrease the quality or access to care for patients.

The literature suggests that if public payment rates are reduced by limiting growth over time, it is unlikely that hospitals will be able to turn to private insurers for higher prices to offset the losses. Instead, hospitals would be more likely to make changes in staffing, infrastructure, or amenities that may be important financially but could affect the quality or types of care delivered. Cost structures that maintain quality of care may decrease, and the number of Medicaid patients that providers are willing to see might decline.

Endnotes

1. Christopher M. Whaley et al., "Prices Paid to Hospitals by Private Health Plans: Findings from Round 5.1 of an Employer-Led Transparency Initiative," RAND Corporation, December 10, 2024; "Appendix 4: Supplementary Data Tables" (PDF), in *Trendwatch Chartbook 2020: Supplementary Data Tables*, Amer. Hospital Assn. (AHA), 2020.

2. For example, Grace-Marie Turner and Avik Roy, "Why States Should Not Expand Medicaid," Galen Institute, May 1, 2013. Cost shifting is also sometimes discussed as a provider response to financial stresses that arise for other reasons, such as caring for uninsured patients for whom the provider may be paid relatively little. In some contexts, this is more precisely referred to as "dynamic cost shifting," which can be distinguished from "static cost shifting." See, for example, Chapin White, "Contrary to Cost-Shift Theory, Lower Medicare Hospital Payment Rates for Inpatient Care Lead to Lower Private Payment Rates," *Health Affairs* 32, no. 5 (May 2013): 935–43.

3. Whaley et al., "Prices Paid to Hospitals"; and "Supplementary Data Tables," AHA.

4. Turner and Roy, "Why States Should Not Expand Medicaid"; White, "Contrary to Cost-Shift Theory."

5. See, for example, Austin Frakt, "How Much Do Hospitals Cost Shift? A Review of the Evidence," *Milbank Quarterly* 89, no. 1 (Mar. 2011): 90–130; Austin Frakt, "Hospitals Don't Shift Costs from Medicare or Medicaid to Private Insurers," *JAMA Forum Archive*, January 4, 2017; Austin Frakt, "Hospitals Are Wrong About Shifting Costs to Private Insurers," *New York Times*, March 23, 2015; White, "Contrary to Cost-Shift Theory"; Michael Morrisey, "Hospital Pricing: Cost Shifting and Competition" (paywall), Employee Benefit Research Institute, May 1993; Michael Morrisey, *Cost Shifting in Health Care: Separating Evidence from Rhetoric* (PDF), Amer. Enterprise Institute for Public Policy Research, 1994.

6. See, for example, Jan P. Clement, "Dynamic Cost Shifting in Hospitals: Evidence from the 1980s and 1990s," *Inquiry* 34, no. 4 (Winter 1997/98): 340–50; David Dranove, "Pricing by Non-Profit Institutions: The Case of Hospital Cost-Shifting," *Journal of Health Economics* 7, no. 1 (Mar. 1988): 47–57; Allen Dobson, Joan DaVanzo, and Namrata Sen, "The Cost-Shift Payment 'Hydraulic': Foundation, History, and Implications," *Health Affairs* 25, no. 1 (Jan./Feb. 2006): 22–33; Jack Zwanziger and Anil Bamezai, "Evidence of Cost Shifting in California Hospitals," *Health Affairs* 25, no. 1 (Jan./Feb. 2006): 197–203; Will Fox and John Pickering, *Hospital and Physician Cost Shift: Payment Level Comparison of Medicare, Medicaid, and Commercial Payers*, AHA, December 2008; and David Cutler, "Cost Shifting or Cost Cutting? The Incidence of Reductions in Medicare Payments," in *Tax Policy and the Economy*, vol. 12, Natl. Bureau of Economic Research (NBER), 1998, 1–28.

7. See, for example, Sherry Glied, "COVID-19 Overturned the Theory of Medical Cost Shifting by Hospitals," JAMA Health Forum 2, no. 6 (June 24, 2021): e212128.

8. In the context of this report, private insurers may refer to a range of entities offering plans under multiple arrangements including traditional private insurance plans offered to employers or individuals, Medicare Advantage plans, some Medicaid managed care plans, or administrative services to self-insured employers. The distinguishing feature of private insurers for the purposes of this report is that they negotiate their payment rates directly with providers.

9. From the standpoint of the seller, market power often refers to the ability of a seller to set and sustain a price above its marginal cost of producing the service. Marginal cost refers to the incremental cost of producing another unit of output. See, for example, Chad Syverson, "Macroeconomics and Market Power: Context, Implications, and Open Questions," *Journal of Economic Perspectives* 33, no. 3 (Summer 2019): 23–43; and William M. Landes and Richard A. Posner, "Market Power in Antitrust Cases," *Harvard Law Review* 94, no. 5 (Mar. 1981): 937–96.

10. Zack Cooper et al., "The Price Ain't Right? Hospital Prices and Health Spending on the Privately Insured," *Quarterly Journal of Economics* 134, no. 1 (Feb. 2019): 51–107; and Frakt, "How Much Do Hospitals Cost Shift."

11. Economists writing about cost shifting sometimes refer to this as assuming "profit maximization." Though it refers to profits, this assumption is also relevant for thinking about nonprofit hospitals, which in this framework maximize the net of revenue minus costs. Theoretical models of health care provider pricing and cost shifting under this "profit maximization" assumption have been developed and examined by a number of authors, including Mark H. Showalter, "Physicians' Cost Shifting Behavior: Medicaid Versus Other Patients," *Contemporary Economic Policy* 15, no. 2 (Apr. 1997): 74–84; Thomas Rice et al., "A Tale of Two Bounties: The Impact of Competing Fees on Physician Behavior," *Journal of Health Politics, Policy, and Law* 24, no. 6 (Dec. 1999): 1307–30; Thomas G. McGuire and Mark V. Pauly, "Physician Response to Fee Changes with Multiple Payers" (PDF), *Journal of Health Economics* 10, no. 4 (1991): 385–410; Joel W. Hay, "The Impact of Public Health Care Financing Policies on Private-Sector Hospital Costs," *Journal of Health Politics, Policy, and Law* 7, no. 4 (Winter 1983): 945–52; and Richard W. Foster, "Cost-Shifting Under Cost Reimbursement and Prospective Payment," Journal of Health Economics 4, no. 3 (Sept. 1985): 261–71. Also see for additional discussion specific to hospital cost shifting Morrisey, "Hospital Pricing"; Morrisey, *Cost Shifting in Health Care*; and Frakt, "How Much Do Hospitals Cost Shift?"

12. This line of reasoning has been developed in detail in a number of studies. See, for example, White, "Contrary to Cost-Shift Theory"; Morrisey, *Cost Shifting in Health Care*; and Vivian Y. Wu, "Hospital Cost Shifting Revisited: New Evidence from the Balanced Budget Act of 1997," *Intl. Journal of Health Care Finance and Economics* 10, no. 1 (Mar. 2010): 61–83.

13. Paul B. Ginsburg, "Can Hospitals and Physicians Shift the Effects of Cuts in Medicare Reimbursement to Private Payers?," *Health Affairs* 22, Suppl. 1 (Oct. 8, 2003): W3-472–79.

14. Dranove, "Pricing by Non-Profit Institutions"; Clement, "Dynamic Cost Shifting in Hospitals"; Jack Zwanziger, Glenn A. Melnick, and Anil Bamezai, "Can Cost Shifting Continue in a Price Competitive Environment?," *Health Economics* 9, no. 3 (Apr. 2000): 211–26; Cutler, "Cost Shifting or Cost Cutting?"; and Morrisey, *Cost Shifting in Health Care*.

15. For example, Dobson et al. characterize it as a simply "hydraulic" response mechanism. Dobson, DaVanzo, and Sen, "The Cost-Shift Payment 'Hydraulic.'" Frakt (2011) cites Karen Ignani, then president and CEO of America's Health Insurance Plans, who characterized it as an exercise in squeezing the balloon — squeezing public prices would have to increase private prices.

16. Morrisey, "Hospital Pricing"; Morrisey, *Cost Shifting in Health Care*; White, "Contrary to Cost-Shift Theory"; and Frakt, "How Much Do Hospitals Cost Shift?". In other models, hospitals may face a trade-off between reducing costs and cost shifting (e.g., Cutler, "Cost Shifting or Cost Cutting?"). In cases where both cost shifting and cost cutting are possible, theoretical models suggest they may be used in combination and will offset each other. In this setting, a public payment reduction would not be offset one-for-one with a private price increase.

17. Whaley, "Prices Paid to Hospitals."

18. There has been much economic discussion of price discrimination. See, for example, Harold Varian, "Price Discrimination," in *Handbook of Industrial Organization*, ed. Richard Schmalensee & Robert D. Willig, vol. 1 (North-Holland, Amsterdam: Elsevier, 1989), 597–654. For a discussion in the context of hospitals, see for example, Uwe E. Reinhardt, "The Pricing of U.S. Hospital Services: Chaos Behind a Veil of Secrecy," *Health Affairs* 25, no. 1 (Feb. 2006): 57–69. Price discrimination is often observed in hospital prices, including in variation in prices for the same provider from one private insurer to another, a situation in which cost shifting is not commonly invoked. See Sarah Kliff and Josh Katz, "Hospitals and Insurers Didn't Want You to See These Prices. Here's Why," *New York Times*, August 22, 2021; Nisha Kurani et al., "Price Transparency and Variation in U.S. Health Services," Peterson-KFF Health System Tracker, January 13, 2021; Whaley et al., "Prices Paid to Hospitals"; Cooper et al., "The Price Ain't Right?"; and John A. Romley et al., *Price Changes Varied Widely Across California Hospital Systems from 2012 Through 2018*, USC Schaeffer Center, August 2022. Hospitals often satisfy the conditions cited in definitions of price discrimination. One is for the seller to possess at least some degree of market power. Other conditions include the seller's ability to identify different customers or groups of customers clearly enough to charge them different prices, and that the good or service in question cannot be easily bought by one customer and resold to another.

19. "Supplementary Data Tables," AHA.

20. *Trendwatch Chartbook 2000: Trends Affecting Hospitals and Health Systems* (PDF), AHA, June 2000; and "Supplementary Data Tables," AHA.

21. Dobson, DaVanzo, and Sen, "The Cost-Shift Payment 'Hydraulic.'"

22. Other studies also focus on analyses of margins. A Price Waterhouse Coopers study focused on payment-to-cost ratios from 1995 to 2005 and argued for the importance of cost shifting. See Fox and Pickering, "Hospital and Physician Cost Shift". Clement, "Dynamic Cost Shifting in Hospitals" focused on correlations between calculated hospital margins. Work by Robinson studied variations in margins in 2008 and found evidence of a negative correlation, though that article notes at the outset that it did not study the "dynamic" cost shifting that is the focus here. It thus might be considered to offer evidence on cross-subsidization, or "static cost shifting," instead. See James Robinson, "Hospitals Respond to Medicare Payment Shortfalls by Both Shifting Costs and Cutting Them, Based on Market Concentration," *Health Affairs* 30, no. 7 (July 2011): 1265–71.

23. Frakt, "How Much Do Hospitals Cost Shift?"

24. For example, Jeffrey Stensland, Zachary R. Gaumer, and Mark E. Miller, "Private-Payer Profits Can Induce Negative Medicare Margins," *Health Affairs* 29, no. 5 (May 2010): 1045–51.

25. Much of the literature included in this section has been more fully summarized in Frakt, "How Much Do Hospitals Cost Shift?"; Morrisey, "Hospital Pricing"; and Morrisey, *Cost Shifting in Health Care*.

26. White, "Contrary to Cost-Shift Theory."

27. Chapin White and Vivian Yaling Wu, "How Do Hospitals Cope with Sustained Slow Growth in Medicare Prices?," *Health Services Research* 49, no. 1 (Feb. 2014): 11–31.

28. Kathryn L. Wagner, "Shock, but No Shift: Hospitals' Responses to Changes in Patient Insurance Mix," *Journal of Health Economics* 49 (Sept. 2016): 46–58; and Kathryn L. Wagner, "Medicaid Expansions for the Working Age Disabled: Revisiting the Crowd-Out of Private Health Insurance," *Journal of Health Economics 40* (Mar. 2015): 69–82.

29. David Dranove, Craig Garthwaite, and Christopher Ody, *How Do Hospitals Respond to Negative Financial Shocks? The Impact of the 2008 Stock Market Crash* (PDF), National Bureau of Economic Research (NBER) Working Paper 18853, NBER, February 2013.

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31. The three studies are Cutler, "Cost Shifting or Cost Cutting?"; Zwanziger and Bamezai, "Evidence of Cost Shifting"; and Wu, "Hospital Cost Shifting Revisited."

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35. Stephen Zuckerman, "Commercial Insurers and All-Payer Regulation: Evidence on Hospitals' Responses to Financial Need," *Journal of Health Economics* 6, no. 3 (Sept. 1987): 165–87.

36. Morrisey, "Hospital Pricing."

37. Frakt, "How Much Do Hospitals Cost Shift?"

38. Richard C. Lindrooth, Gloria J. Bazzoli, and Jan Clement, "The Effect of Reimbursement on the Intensity of Hospital Services," *Southern Economic Journal* 73, no. 3 (Jan. 2007): 575–87; and Daniel L. Friesner and Robert Rosenman, "Cost Shifting Revisited: The Case of Service Intensity," *Health Care Management Science* 5, no. 1 (Feb. 2002): 15–24.

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42. Dranove and White, "Medicaid-Dependent Hospitals."

43. Sherry Glied, "COVID-19 Overturned the Theory of Medical Cost Shifting by Hospitals," *JAMA Health Forum* 2, no. 6 (June 24, 2021): e212128.

44. Michael E. Chernew et al., "Public Payment Rates for Hospitals and the Potential for Consolidation-Induced Cost Shifting," *Health Affairs* 40, no. 8 (Aug. 2021): 1277–85.

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