Impact of Policy Options for Reducing Hospital Prices Paid by Private Health Plans

Jodi L. Liu, Zachary M. Levinson, Nabeel Shariq Qureshi, Christopher M. Whaley
Preface

In this report, we analyze the spending impact of policy options to reduce hospital prices paid by private health plans. We consider three policy options—regulating hospital prices, improving price transparency, and increasing competition among hospitals—with various design choices and effectiveness levels for each approach. We estimate that price regulation could have the largest impact on hospital prices and spending but would likely face political challenges and could have broader impacts on the health care delivery system, while improving price transparency and competition could help reduce prices, but to a lesser extent than price regulation.

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**RAND Health Care Communications**
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Santa Monica, CA 90407-2138
(310) 393-0411, ext. 7775
RAND_Health-Care@rand.org
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Summary

Hospital spending—the largest health spending category in the United States—accounts for one-third of national health expenditures; in 2018, U.S. hospital spending totaled $1.2 trillion (Centers for Medicare & Medicaid Services [CMS], 2020a). Private insurers cover approximately 40 percent of this hospital spending. Compared with public payers, private insurers pay higher prices to hospitals, and their prices have risen faster over time (American Hospital Association [AHA], 2018).

In response to high health care spending and concerns about affordability, policymakers have proposed a variety of reforms to increase health insurance coverage and modify how providers are paid. In this report, we focus on policies that address prices paid to hospitals by private health plans. We analyze the impact of three policy options—regulating hospital prices, improving price transparency, and increasing competition among hospitals—on hospital spending by employer-sponsored and individual market plans and their enrollees. For each policy option (see Table S.1), we explore key considerations and estimate the potential impact on hospital prices and spending using data from the CMS Hospital Cost Report Information System.
Our goal in this report is to estimate the potential impact on hospital prices and spending for a range of policy designs and assumptions for each option. To this end, we provide a “menu” of policy scenarios to help policymakers understand how key design choices or stakeholder responses might affect the impact of a given policy.

In Table S.2, we show the estimated changes in what private health plans would pay hospitals under different policy scenarios. We estimate that regulating prices for all private plans, by either setting or capping prices, has the potential for a significant impact on hospital spending. The effect of this approach, however, is tied to the magnitude of potential price cuts, which have historically been opposed by provider groups. Setting prices for all commercial payers could reduce hospital spending by $61.9 billion to $236.6 billion when the rates are 100 to 150 percent of Medicare rates; this change is equivalent to a 1.7- to 6.5-percent reduction in national health spending. While it may be more feasible to regulate prices for a subset of payers (public option plans) or hospitals (those in highly concentrated markets), these approaches would have a smaller impact, reducing hospital spending by $4.7 billion to $25.4 billion, a 0.1- to 0.7-percent decrease in national health spending, when rates are 100 to 150 percent of Medicare rates.

<table>
<thead>
<tr>
<th>Policy Options to Reduce Hospital Prices Paid by Private Health Plans</th>
<th>Regulating Prices</th>
<th>Improving Price Transparency</th>
<th>Increasing Competition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Option</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Set or cap hospital prices paid by private health plans</td>
<td>Collect and disclose hospital prices paid by private health plans</td>
<td>Reduce hospital market power and challenge anticompetitive behavior.</td>
<td></td>
</tr>
<tr>
<td><strong>Motivation</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Lower prices directly.</td>
<td>Help patients, employers, and plans shift care toward less expensive facilities and pressure hospitals to reduce prices.</td>
<td>Rely on market forces to drive prices down toward competitive levels.</td>
<td></td>
</tr>
<tr>
<td><strong>Key considerations</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Whether to set or cap prices</td>
<td>- What price information to disclose, including the level of granularity</td>
<td>Approaches that could prevent or discourage consolidation</td>
<td></td>
</tr>
<tr>
<td>- Price level</td>
<td>- Who would have access</td>
<td>facilitate market entry</td>
<td></td>
</tr>
<tr>
<td>- Scope of payers and providers involved</td>
<td>- Design of price transparency tools</td>
<td>challenge anticompetitive practices</td>
<td></td>
</tr>
<tr>
<td><strong>Key limitations</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Could encounter substantial political opposition from provider groups</td>
<td>- Uncertain responses by patients, employers, and plans that could evolve over time</td>
<td>- Strengthen insurers’ bargaining power</td>
<td></td>
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<tr>
<td>- Could lead to reductions in quality of care</td>
<td>- Could lead to higher prices in some scenarios (e.g., by facilitating price collusion)</td>
<td>- Break up existing hospital systems</td>
<td></td>
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<tr>
<td></td>
<td>- Effectiveness would depend on other changes, e.g., the growth of benefit designs that incentivize price shopping</td>
<td>- Implement price regulation as a backstop for scenarios where market concentration persists</td>
<td></td>
</tr>
</tbody>
</table>

Approaches that could prevent or discourage consolidation, facilitate market entry, challenge anticompetitive practices, strengthen insurers’ bargaining power, break up existing hospital systems, and implement price regulation as a backstop for scenarios where market concentration persists.
Table S.2. Impact of Rate Regulation, Price Transparency, and Market Competition Policies on Hospital Prices and Spending by Private Health Plans

<table>
<thead>
<tr>
<th>Policy Scenario</th>
<th>Percentage Change in Average Hospital Price Paid by Private Plans</th>
<th>Change in Hospital Spending ($ Billions)</th>
<th>Percentage Change in National Health Spending</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rate setting in all private plans</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>–41.7</td>
<td>–236.6</td>
<td>–6.5</td>
</tr>
<tr>
<td>125</td>
<td>–27.2</td>
<td>–152.8</td>
<td>–4.2</td>
</tr>
<tr>
<td>150</td>
<td>–12.6</td>
<td>–61.9</td>
<td>–1.7</td>
</tr>
<tr>
<td>175</td>
<td>+1.9</td>
<td>+36.1</td>
<td>+1.0</td>
</tr>
<tr>
<td><strong>Rate setting in a public option</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>–4.5</td>
<td>–23.0</td>
<td>–0.6</td>
</tr>
<tr>
<td>125</td>
<td>–2.9</td>
<td>–13.2</td>
<td>–0.4</td>
</tr>
<tr>
<td>150</td>
<td>–1.4</td>
<td>–4.7</td>
<td>–0.1</td>
</tr>
<tr>
<td>175</td>
<td>+0.2</td>
<td>+2.3</td>
<td>+0.1</td>
</tr>
<tr>
<td><strong>Rate setting for dominant hospitals</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>–4.8</td>
<td>–25.4</td>
<td>–0.7</td>
</tr>
<tr>
<td>125</td>
<td>–3.4</td>
<td>–17.9</td>
<td>–0.5</td>
</tr>
<tr>
<td>150</td>
<td>–2.0</td>
<td>–9.7</td>
<td>–0.3</td>
</tr>
<tr>
<td>175</td>
<td>–0.6</td>
<td>–1.0</td>
<td>–0.0</td>
</tr>
<tr>
<td><strong>Capped rates in all private plans</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>–43.2</td>
<td>–246.4</td>
<td>–6.8</td>
</tr>
<tr>
<td>125</td>
<td>–30.8</td>
<td>–178.5</td>
<td>–4.9</td>
</tr>
<tr>
<td>150</td>
<td>–20.5</td>
<td>–119.1</td>
<td>–3.3</td>
</tr>
<tr>
<td>175</td>
<td>–12.7</td>
<td>–72.8</td>
<td>–2.0</td>
</tr>
<tr>
<td>200</td>
<td>–7.6</td>
<td>–42.7</td>
<td>–1.2</td>
</tr>
<tr>
<td><strong>Price transparency</strong></td>
<td>34% shoppable services</td>
<td>–1.7</td>
<td>–8.7</td>
</tr>
<tr>
<td></td>
<td>43% shoppable services</td>
<td>–1.4</td>
<td>–11.1</td>
</tr>
<tr>
<td><strong>Employer-driven response toward</strong></td>
<td>75th percentile price</td>
<td>–2.2</td>
<td>–13.2</td>
</tr>
<tr>
<td></td>
<td>median price</td>
<td>–4.7</td>
<td>–26.6</td>
</tr>
<tr>
<td><strong>Increased hospital competition</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HHI decrease of up to 1,000 points</strong></td>
<td>small price response</td>
<td>–1.0</td>
<td>–6.2</td>
</tr>
<tr>
<td></td>
<td>medium price response</td>
<td>–1.9</td>
<td>–12.4</td>
</tr>
<tr>
<td></td>
<td>large price response</td>
<td>–7.0</td>
<td>–43.8</td>
</tr>
<tr>
<td><strong>HHI decrease to 1,500</strong></td>
<td>small price response</td>
<td>–1.6</td>
<td>–9.9</td>
</tr>
<tr>
<td></td>
<td>medium price response</td>
<td>–3.1</td>
<td>–19.7</td>
</tr>
<tr>
<td></td>
<td>large price response</td>
<td>–11.2</td>
<td>–68.9</td>
</tr>
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</table>

**NOTES:** The changes in average hospital prices and spending reflect the estimated impact of each policy on 4,034 nonfederal, short-stay hospitals reporting data to the Hospital Cost Reporting Information System (HCRIS) in 2018. The percentage changes in spending are relative to private health insurance expenditures and national health expenditures in the National Health Expenditure Accounts (CMS, 2020a). Private health insurance expenditures include those for fully insured and self-insured health plans and do not include expenditures for Medicare Advantage and Medicaid managed care programs. The Herfindahl-Hirschman Index (HHI) is a measure of market concentration; the U.S. Department of Justice and Federal Trade Commission define an HHI below 1,500 points as unconcentrated, an HHI between 1,500 and 2,500 as moderately concentrated, and an HHI above 2,500 as highly concentrated. Under the first competition policy scenario, the HHI would decrease: (1) to 1,500 in moderately concentrated markets (i.e., by up to 1,000 points) and (2) by 1,000 points in highly concentrated markets. A 1,000-point decrease reflects the difference between the upper bound for an unconcentrated market (1,500) and the upper bound for a moderately concentrated market (2,500).
concentrated market (2,500). Under the second competition policy scenario, the HHI would decrease to 1,500 in all regions above that threshold (e.g., with decreases greater than 1,000 points in highly concentrated regions).

Capping prices has the potential for the largest impact on hospital spending: Capping prices would reduce prices above the cap, while setting prices would reduce prices above the set price and raise prices below the set price, which would offset the reductions. Our estimates for potential changes in hospital prices and spending under the capped price scenarios are conservative because they reflect a cap on average hospital prices rather than a cap on prices for individual services or payers.

We estimate that increasing hospital price transparency would not reduce costs as much as regulating hospital prices could. We attribute the relatively smaller impact of price transparency initiatives on spending—with potential reductions of $8.7 billion to $26.6 billion—to several factors: Not only are certain services not shoppable (e.g., patients typically do not compare prices for emergency services before seeking care), but the effectiveness of price transparency initiatives would depend on other changes as well—for example, more use of price transparency tools by patients and employers and more plan benefit designs that incentivize the use of lower-priced hospitals. Because of the uncertainty in how patients and employers would respond to price transparency initiatives, we modeled patient-driven scenarios, in which patients use price information to seek lower prices, and employer-driven scenarios, in which employers use price information to seek plans that steer patients toward lower-cost hospitals.

We also estimate that a large increase in hospital market competition would not save as much as regulating hospital prices for all private plans. We estimate that decreasing hospital market concentration would reduce hospital spending by $6.2 billion to $68.9 billion, depending on the magnitude of the change and how sensitive hospital prices are to market concentration. Given how concentrated today’s hospital markets are, policymakers would need to radically restructure hospital markets—and more so than modeled here—for prices to approach competitive levels.

When policymakers weigh options for reducing hospital prices, they will need to consider design choices and how different policies might affect outcomes, such as hospital revenues and quality of care. Improving markets through increased price transparency and competition could help reduce prices but might not reduce hospital spending to the extent that aggressively regulating prices could. Direct price regulation could have the largest impact on hospital spending, but this approach faces political challenges and could have broader impacts on the health care delivery system. Our analysis of different policy scenarios—regulating rates, improving price transparency, and increasing market competition—can inform policymakers as they consider approaches to reduce health care spending in the United States.
Acknowledgments

This research was conceptualized with Chapin White, formerly at the RAND Corporation and now at the U.S. Congressional Budget Office. We thank Brent Fulton of the University of California, Berkeley, and Cheryl Damberg, Christine Eibner, and Paul Koegel of RAND for their valuable feedback in the quality assurance review of this report. We are grateful to Libby May and Patricia Smith of RAND for their excellent assistance in preparing this report.
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AHA</td>
<td>American Hospital Association</td>
</tr>
<tr>
<td>AHRQ</td>
<td>Agency for Healthcare Research and Quality</td>
</tr>
<tr>
<td>APCD</td>
<td>All-Payer Claims Database</td>
</tr>
<tr>
<td>CMS</td>
<td>Centers for Medicare and Medicaid Services</td>
</tr>
<tr>
<td>CON</td>
<td>certificate of need</td>
</tr>
<tr>
<td>COPA</td>
<td>certificate of public advantage</td>
</tr>
<tr>
<td>DOJ</td>
<td>U.S. Department of Justice</td>
</tr>
<tr>
<td>ESI</td>
<td>employer-sponsored insurance</td>
</tr>
<tr>
<td>FTC</td>
<td>Federal Trade Commission</td>
</tr>
<tr>
<td>HCRIS</td>
<td>Hospital Cost Report Information System</td>
</tr>
<tr>
<td>HHI</td>
<td>Herfindahl-Hirschman Index</td>
</tr>
<tr>
<td>HRR</td>
<td>hospital referral region</td>
</tr>
<tr>
<td>KFF</td>
<td>Kaiser Family Foundation</td>
</tr>
<tr>
<td>MEPS-HC</td>
<td>Medical Expenditure Panel Survey Household Component</td>
</tr>
<tr>
<td>MSA</td>
<td>metropolitan statistical area</td>
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<td>OOP</td>
<td>out-of-pocket</td>
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1. Introduction

Nearly 20 percent of gross domestic product in the United States is allocated toward health care, which is well above the expenditure of any other developed nation (Hartman et al., 2019; Tikkanen and Abrams, 2020). An important contributor to greater health care spending in the United States relative to other countries is higher unit prices for health care services (Anderson et al., 2003; Papanicolas, Woskie, and Jha, 2018; Anderson, Hussey, and Petrosyan, 2019). Shrank, Rogstad, and Parekh (2019) estimate that pricing failures result in $230.7 billion to $240.5 billion in waste.

Hospitals are of particular interest because they represent the largest share, 33 percent, of national health spending (Centers for Medicare and Medicaid Services [CMS], 2020a). Hospitals account for approximately $1.2 trillion in spending per year. Hospital revenues consist of payments from private insurers and a variety of public insurers, predominantly Medicare and Medicaid. Prices paid to hospitals by private insurers, the largest source of insurance coverage in the United States, have increased faster than prices for other types of health care (Hartman et al., 2019).

A distinguishing feature of the United States relative to other nations is the presence of employer-sponsored insurance, which provides health insurance benefits to over 150 million Americans (Kaiser Family Foundation [KFF], 2018). Employers typically provide health insurance benefits to employees and their families, contracting with third-party insurance companies to administer benefits and negotiate prices. These negotiations often result in opaque price contracts that do not allow employers or patients to make informed decisions about prices.

This price negotiation dynamic has led to hospital prices paid by private insurers that are substantially higher than prices paid by Medicare and other public payers (Whaley et al., 2020a). At the same time, variations in market structure and negotiation leverage contribute to prices that vary widely, both within markets and between markets. For example, previous work finds that employers and private insurers pay hospital prices that are 247 percent the rate paid by Medicare, and these prices vary widely across states and geographic regions (Whaley et al., 2020a). A common argument for this difference is that higher private insurance prices are due to underpayments by Medicare, Medicaid, and uncompensated-care patients. However, despite the difference in payment levels, empirical evidence does not support the theory that lower public-payer prices cause higher private prices (White, 2013; Frakt, 2011; Frakt, 2014; Wagner, 2016; White and Wu, 2014). Instead, variation in private prices is explained by variations in reputation, quality, and negotiation leverage. As in other industries, variation in hospital prices largely reflects variation in pricing ability and preferences, rather than lower public-payer prices causing higher private-payer prices.
Private hospital prices are established through a negotiation process between hospitals and insurers. Hospitals for which patients have stronger preferences—because of hospital reputation, quality, or market share—are able to negotiate higher prices in relation to their threat of exclusion from hospital networks (Ho, 2009; Gowrisankaran, Nevo, and Town, 2015; Capps, Dranove, and Satterthwaite, 2003). Increases in hospital prices have been due in part to horizontal consolidation among hospitals. Between 2010 and 2015, there were 561 merger events involving 1,260 hospitals (American Hospital Association [AHA], 2016). Substantial evidence links hospital mergers to increases in prices (Dafny, Ho, and Lee, 2018; Cooper et al., 2018). Related work finds that hospital mergers lead to both increases in hospital spending and reductions in wages for the privately insured population (Arnold and Whaley, 2020). At the same time, many private hospital systems are becoming vertically integrated with physician organizations. Such integration can direct patient referrals to higher-priced hospitals within the system and away from lower-priced community providers (Whaley et al., 2020b; Baker, Bundorf, and Kessler, 2016). A review of all hospital mergers between 2009 and 2013 found that hospital mergers do not lead to improvements in quality (Beaulieu et al., 2020). Likewise, research has found that vertical integration does not lead to increases in the quality of care (Short and Ho, 2019; Post, Buchmueller, and Ryan, 2018; Machta et al., 2019).

High prices have contributed to frustration with the current U.S. health care system. In response, federal and state policymakers, researchers, and health advocates have introduced a variety of proposed reforms. These policy options include establishing a single-payer system; creating a public option for health insurance; regulating hospital prices by linking them to a public program, such as Medicare; and enacting policies that would require hospitals and insurers to disclose information about negotiated prices to patients.

Despite the breadth of proposed options to address health care affordability, there is little evidence about the relative impacts of the range of policy options. In this report, we model the potential financial effects of three policies—regulating hospital prices, improving price transparency, and increasing competition. For each approach, we quantify the potential impacts on hospital prices and spending by privately insured populations. This report aligns with recent reports that have focused on the impacts of policies that expand access to insurance coverage (Liu et al., 2020; Eibner et al., 2019). However, rather than considering initiatives to expand coverage, which has been the policy focus to date, we focus on policies designed to address hospital prices for those with private insurance.

We find wide differences in the potential impacts of each policy and within-policy differences depending on the design of a particular policy option. For example, we estimate that setting commercial hospital prices to Medicare prices would lead to a $236.6 billion reduction in health care spending, representing 19.0 percent of health spending by private health plans and 6.5 percent of national health spending. At the same time, we estimate that improved price transparency could lead to an $8.7 billion to $26.6 billion reduction in spending, representing about 0.7 percent to 2.1 percent of private health plan spending. Increasing hospital competition
is another moderate-impact policy, which we estimate could lead to a $6.2 billion to $68.9 billion reduction in spending (0.5 percent to 5.5 percent of private health plan spending).

These estimates are important because implementing each policy option has its own limitations, costs, and political challenges. For example, policies to improve price transparency are currently underway, but we estimate that these policies will have limited impact based on patient and employer responses to existing tools. Regulating hospital prices would likely be difficult to implement, given provider resistance, but would likely yield larger savings. This report is not intended to promote certain policy options or to model the dynamic impacts of changes to hospital financing. Rather, it is designed to inform policymakers on the potential financial implications of a wide range of policy options. Policymakers can use these estimates to inform their decisions on how to address rising health care prices for the privately insured population in the United States.
2. Options to Reduce Hospital Prices

Data Sources, Methods, and Descriptive Results

To obtain estimates of hospital prices by payer category, we relied on Hospital Cost Report Information System (HCRIS) (CMS, 2020a) data available through the RAND Corporation Hospital Cost Tool (White, 2018). We estimated average hospital prices by calculating the revenue per discharge equivalent for Medicare and for commercial payers. Total hospital revenues include revenue from inpatient and outpatient settings. We included traditional Medicare and Medicare Advantage revenue as Medicare revenue. We defined commercial revenue as total revenue minus Medicare and Medicaid revenues; thus, traditional Medicare, Medicare Advantage, and Medicaid managed care plans are not included in the commercial prices. To reflect hospitals’ inpatient and outpatient service volumes, we defined discharge equivalents as the number of inpatient discharges multiplied by the ratio of total operating expenses divided by inpatient operating expenses. We computed Medicare discharge equivalents as the sum of Medicare inpatient discharges, Medicare outpatient discharge equivalents (discharge equivalents less inpatient discharges, multiplied by the ratio of Medicare outpatient charges to total outpatient charges), and Medicare Advantage discharge equivalents. We computed commercial discharge equivalents as total discharge equivalents less Medicaid and Medicare discharge equivalents. See Appendix A for additional details.

We applied several sample restrictions, resulting in a total of 4,034 hospitals. First, we limited our sample to 4,268 facilities that were nonfederal, short-stay hospitals and that reported HCRIS cost data in 2018, which excludes Veterans Affairs, long-term, cancer, psychiatric, rehabilitation, religious nonmedical, children’s, alcohol and drug, and other hospitals that do not provide general acute inpatient care. Second, we excluded 223 low-volume hospitals, which we defined as having 100 or fewer commercial discharge equivalents in 2018. Third, we excluded seven hospitals with an average commercial price less than 10 percent of its average Medicare price. Last, we excluded four hospitals that were part of the Kaiser Permanente system because of their unique system characteristics.

Table 2.1 shows the average commercial and Medicare prices for the 4,034 hospitals in our analysis. The distribution of prices by payer for the 4,034 hospitals are also shown in Figure 2.1. Prior studies reported similar average prices for inpatient admissions paid by commercial payers and Medicare (Maeda and Nelson, 2017; Baker et al., 2016). Note that the unweighted commercial-to-Medicare price ratio for the 4,268 short-stay hospitals prior to our exclusion criteria is 251 percent, which is similar to prices reported in previous work (Whaley et al.,

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1 These low-volume hospitals include outlier average commercial prices that exceed $1 million.
The geographic variation in commercial prices relative to Medicare prices by hospital referral region (HRR) is shown in Figure 2.2.

**Table 2.1. Average Hospital Prices, by Payer**

<table>
<thead>
<tr>
<th></th>
<th>Unweighted</th>
<th></th>
<th>Weighted</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Standard Deviation</td>
<td>Mean</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>Commercial price ($)</td>
<td>26,109</td>
<td>33,735</td>
<td>24,050</td>
<td>13,782</td>
</tr>
<tr>
<td>Medicare price ($)</td>
<td>13,032</td>
<td>5,749</td>
<td>14,010</td>
<td>4,913</td>
</tr>
<tr>
<td>Commercial-to-Medicare ratio</td>
<td>1.96</td>
<td>1.41</td>
<td>1.73</td>
<td>0.69</td>
</tr>
</tbody>
</table>

**SOURCE:** Authors’ analysis using HCRIS data.

**NOTE:** The table shows average prices for the 4,034 hospitals included in this analysis. The weighted means are weighted by discharge equivalents for each hospital.

**Figure 2.1. Distribution of Prices, by Payer**

**SOURCE:** Authors’ analysis using HCRIS data.

**NOTE:** From top to bottom, the plot depicts the 95th percentile value (top whisker), the third quartile (75th percentile), the median (50th percentile), the first quartile (25th percentile), and the 5th percentile value (bottom whisker).
Policy Options

To identify policy options that could reduce hospital prices paid by private plans, we reviewed the literature and consulted with RAND colleagues. First, we generated a list of policies based on preliminary literature searches. Then, we discussed the policies with colleagues and considered the availability of evidence to generate quantitative estimates on spending and feasibility. For this analysis of spending estimates at one point in time, we excluded policies that would primarily affect price growth over time, such as caps on price growth. To focus on hospital price reductions, we excluded policies that would reduce spending primarily by decreasing volume and shifting care to lower-cost settings, such as accountable care organizations and global budgets, which aim to improve coordination and reduce unnecessary care. The final policy options included in this analysis are rate regulation, improving price transparency, and increasing competition.

Overview of Approaches

To model policies that affect hospital prices paid by private health plans, we simulated changes directly to hospital-level prices or indirectly through changes in price transparency or hospital market concentration. The scenarios analyzed are described briefly below and in more detail in the subsequent chapters. In all scenarios, we estimated changes to commercial hospital prices and left Medicare and Medicaid prices unchanged.

For rate setting scenarios, we changed average commercial plan prices to a price relative to Medicare prices for a given hospital. We assessed prices pegged to multiples of the Medicare
price (e.g., 100 percent to 175 percent of Medicare prices) and blended rates in between commercial and Medicare prices (e.g., using 25 percent of the Medicare rate and 75 percent of the commercial rate). Similarly, we modeled caps on average commercial prices as a multiple of the Medicare price for hospitals; these are conservative estimates of price caps that could be applied at the service level.

To model the impact of improved price transparency and competition among hospitals, we used empirical estimates from the literature to simulate changes in commercial prices. We modeled the price transparency scenarios assuming different patient and employer responses. We modeled competition scenarios by reducing hospital market concentration in HRRs and computing a price reduction with respect to the change in market concentration.

Changes in payment rates can have effects on overall quantity of services delivered through supply- and demand-side factors. We accounted for changes in quantity by assuming that lower prices decrease providers’ desired supply of services and increase consumers’ desired demand for services. These competing effects are parameterized by supply-and-demand elasticities with respect to payment and “congestion” (White et al., 2016) and an assumption of equal weight between providers’ and patients’ desired quantities (Liu et al., 2018). For the price effects on patient demand, we assumed that patients respond only to the portion of costs that they are responsible for based on their out-of-pocket (OOP) costs. We estimated the average share of OOP hospital payments paid by commercial plan enrollees using the 2017 Medical Expenditure Panel Survey Household Component (MEPS-HC) (Agency for Healthcare Research and Quality [AHRQ], 2019). With price reductions, the resulting effect on quantity is negative in this analysis, because of the smaller demand elasticity compared with the supply elasticity and patients responding to the OOP portion of price reduction while hospitals respond to the full price reduction. We conducted sensitivity analyses with no quantity changes and found similar results (data not shown). See Appendix A for a description of the parameters and example calculations.

**Limitations**

This analysis focuses on the impact of policies on average hospital prices paid by private health plans. A limitation is that average prices mask variation in prices for specific services, which could be high for one service and low for another service at the same hospital. Policies could aim to reduce prices for specific services or types of services. While the hospital cost report data do not contain prices for specific services, the cost reports are the only data source that contains revenue and quantities for all U.S. hospitals and serves to illustrate the potential impact of policies that could affect all inpatient and outpatient services within a hospital.

The estimates in this report are for hospital revenue and spending in a single year. The scenarios do not include policies that would affect price growth over time. For example, policymakers may consider rate regulation that phases in price changes to ease the transition for
hospitals. Price transparency initiatives may require time for patients and employers to become familiar with tools, to seek lower prices, and to thus realize savings net of the cost of transparency tools.

A key challenge in rate regulation is determining the appropriate price level. This analysis focuses on scenarios that use Medicare rates to set or cap commercial prices for hospitals. A limitation is that we do not consider differences in the underlying costs of care for the commercial and Medicare populations. One alternative would be to establish a process in parallel to the Medicare cost-accounting processes that considers the costs of the commercial population and sets rates based on actual costs of care plus a margin. This approach would mirror price regulation in other settings, including Medicare (Shleifer, 1985).

A related consideration is that we do not model the extent to which reductions in hospital revenues could result in possible adverse effects, such as hospital closures or reductions in quality of care. For example, research suggests that prices paid by private plans support investments in quality-enhancing technology (Garthwaite, Ody, and Starc, 2020). However, it is less clear how reductions in prices paid by private plans would affect investments in quality of care. Possible effects of price reductions on hospital finances, staffing, and quality of care are discussed further in Chapter 6.

Another limitation of our work is that we do not estimate the administrative costs of these policy options, which would offset savings to some degree. Regulating commercial prices would likely require new funding for an administrative body to monitor trends in hospital markets and set reimbursement rates or caps. Increasing price transparency initiatives would entail administrative costs associated with collecting and standardizing price data and, as applicable, developing price transparency tools. Finally, many of the policy options that would increase hospital market competition would do so by expanding the efforts of the U.S. Department of Justice (DOJ), Federal Trade Commission (FTC), and state regulatory bodies, which would necessitate additional resources.

Deriving the estimates in this report required making a number of assumptions—as detailed in the following chapters and in Appendix A—and therefore entailed some level of uncertainty. In particular, it is unclear how providers, patients, employers, and health plans would respond to policies that affect competition and price transparency. Previous studies have generally confirmed that increases in market concentration correspond to higher prices, but the magnitude of this relationship varies. Thus, we assessed alternative scenarios with different levels of price elasticity with respect to market concentration. In the literature on price transparency that is relatively limited, there is not a clear consensus on how effective such initiatives would be, and the precise effect likely depends on other market trends that are difficult to predict (e.g., whether health plans would introduce benefit designs that incentivize enrollees to shop for inexpensive providers). To illustrate possible effects, we assessed alternative scenarios with different assumptions related to patient-driven and employer-driven responses. Finally, as with other
regulation mechanisms, potential lobbying and influence by stakeholders could influence the realized outcomes and design of a given policy (Stigler, 1971; Chan and Dickstein, 2019).

A final area of uncertainty is the extent to which reductions in hospital rates would result in changes in the quantity of services delivered. In this analysis, we account for an overall decrease in the quantity of services delivered when payments decrease, reflecting a decrease in hospitals’ desired quantity when lower prices are only partially offset by greater demand for services by patients. However, we do not account for shifts in the quantity of services across payer types and settings. It is possible that reduced hospital payments by private plans could result in hospitals shifting some of their resources to deliver more care to other payers—which could be non-commercial payers or other commercial payers if the price reductions affect only certain payers—although prior studies have found little evidence of “cost shifting” (Frakt, 2011). It is also possible that care could shift to nonhospital settings, which could offset the reductions in hospital spending. In addition, the implications for quantity changes would depend on market conditions and could vary geographically.
3. Rate Regulation

Background

State or federal governments can directly affect hospital prices paid by commercial payers by regulating payment rates. Regulatory rate setting currently occurs in public insurance programs, such as Medicare, through annual rulemaking processes that establish payment rates based on estimates of the underlying costs of providing services. CMS establishes Medicare payment rates for hospital services in the Inpatient Prospective Payment System and Outpatient Prospective Payment System from claims and hospital cost report data. Unlike public programs that have administratively set rates, commercial payers and providers typically negotiate rates under confidential agreements. State and federal regulators and policymakers could set commercial payment rates to a specific level or, alternatively, require that rates be below a cap, which would reduce high hospital prices while allowing prices below the cap to be affected by market forces and negotiation. Caps could target excessive prices or price growth.

Although many states established hospital rate setting systems in the 1960s and 1970s, most deregulated this process in the 1980s and 1990s (McDonough, 1997; Sommers, White, and Ginsburg, 2012; Murray and Berenson, 2015). Most recently, West Virginia passed legislation that discontinued its hospital rate setting system in 2016 (West Virginia Health Care Authority, undated). The remaining state hospital rate setting system is Maryland’s all payer system, which has been in effect since 1977 and incorporated a global budget cap in 2014 (Haber et al., 2019; Murray, 2009; Murray and Berenson, 2015). Prior to 2014, the state’s Health Services Cost Review Commission (HSCRC) set service-specific hospital rates for all payers—including Medicare through a waiver from CMS—but did not restrict total hospital revenues (Murray, 2009; Berenson et al., 2020). Hence, while the state was, at times, able to reduce the growth rate of cost per admission, its all-payer system was less successful in constraining the total number of admissions (Berenson et al., 2020; Haber et al., 2019). Since 2014, Maryland has moved to a system where the HSCRC sets an annual budget for each hospital and then establishes service-specific rates such that total expected payments match the budget each year.

Some states have also set hospital rates paid by state employee health plans. Montana enacted legislation that requires the state employee health plan to pay hospitals an average of 234 percent of Medicare rates, a policy that faced substantial pushback from hospitals before they eventually agreed to the rates in 2016 (Appleby, 2018). A proposal for the North Carolina state employee health plan to pay hospitals nearly 200 percent of Medicare rates also was opposed by

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2 CMS establishes the Medicare Physician Fee Schedule using the Resource-Based Relative Value Scale system based on survey data and recommendations from the Relative Value Update Committee.
hospital groups (North Carolina Department of the State Treasurer, 2019), and only three hospitals participated in the plan in 2020 (Rau, 2020).

Rate regulation can occur on its own or as part of broader reform proposals. For example, coverage expansion proposals—such as single-payer health care and public options—often involve rate setting. The two single-payer bills introduced in the 116th Congress (2019–2021) do not specify provider rates but would either establish a single fee schedule using processes similar to Medicare’s or establish global budgets for hospitals (KFF, 2019).

Recent public option proposals would create government-run or government-sponsored health plans that regulate provider payment rates. In 2019, four federal public option bills included provider payment rates equal to Medicare rates or between Medicare and commercial rates (KFF, 2019). States have also proposed public option legislation and one state—Washington—passed legislation to implement a public option (State of Washington, 2019). Washington state policymakers approved a public option that will pay providers no more than 160 percent of Medicare rates, on average. Colorado has proposed legislation for a public option that would have a base hospital payment rate at 155 percent of Medicare rates and increases for certain types of hospitals (House Bill 20-1349, 2019; State of Colorado, 2020). During the coronavirus pandemic, both Washington and Colorado rolled back or delayed their plans for a state-based public option (Paul, 2020; Goldberg, 2020). In Washington, public option plans will be available in 19 of 39 counties in 2021 (Washington State Health Care Authority, 2020). Although federal bills stipulate that providers accepting Medicare would be required to participate in the public option, a state public option would not be able to leverage Medicare participation and could therefore face greater challenges in ensuring that an adequate number of providers participate at reduced rates.

Recent proposals set caps relative to Medicare rates, e.g., 120 percent or 125 percent of Medicare (Kocher and Berwick, 2019; Skinner, Fisher, and Weinstein, 2014), or relative to commercial prices (Chernew, Dafny, and Pany, 2020). Another proposal would cap out-of-network payments alone (Song, 2017). This more targeted approach is often intended to prevent surprise medical bills. However, in addition to directly reducing out-of-network prices, these proposals may also have indirect effects on in-network prices by reducing the threat of high out-of-network prices and therefore reducing hospitals’ bargaining leverage in negotiations with private plans. Indeed, prices paid by Medicare Advantage plans—whose out-of-network rates are capped at Medicare levels—are significantly lower than prices paid by other commercial plans (Song, 2017). Recent proposals would limit out-of-network payments based on multiples of Medicare rates that decline over time, ranging from 125 percent to 200 percent of Medicare rates (Council for Affordable Health Coverage, 2019). These initiatives would build on existing state and federal efforts to constrain surprise billing by out-of-network providers (Keith, 2021; Kliff, 2019; Hoadley, Fuchs, and Lucia, 2020).

In addition to state public option bills, several states have programs that cap prices. These programs vary in the types of payment and payers involved. For example, Oregon’s public
employee plan pays hospitals up to 200 percent of Medicare rates for inpatient services and 185 percent for outpatient services (ORS 243.256, undated-a; ORS 243.879, undated-b). State insurance commissioners can also review rates for commercial plans more widely and, more recently in some states, can impose restrictions if a plan is found to be unaffordable. For example, in 2019, Colorado passed legislation that allows the consideration of affordability standards in rate reviews for all commercial insurers (House Bill 19-1233, 2019). The Colorado insurance commissioner expressed the intention to propose a rule that provides the commissioner with the authority to block the sale of a health plan if prices negotiated between insurers and hospitals are too high, e.g., compared with a percentage of Medicare rates (Ingold, 2019). Other states have focused on limiting price growth. For example, Rhode Island’s affordability standards include annual inflation caps on hospital prices paid by all commercial insurers (Baum et al., 2019), and the Massachusetts Health Policy Commission reviews prices that exceed a benchmark (3.1-percent growth in 2020; Massachusetts Health Policy Commission, 2019).

Finally, one recent policy proposal would apply restrictive price caps to dominant hospitals in extremely concentrated markets (Roy, 2020). In addition to directly constraining prices, this policy would lead to lower prices by disincentivizing hospital consolidations (Roy, 2020). (See Chapter 6 for a discussion of other policy options that would reduce prices by increasing market competition.)

Table 3.1 describes programs and proposals that include setting or capping rates.

<table>
<thead>
<tr>
<th>Program or Proposal</th>
<th>Scope</th>
<th>Rate Regulation</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting rates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maryland hospital all-payer rate setting</td>
<td>Maryland hospitals</td>
<td>1977–2014: All-payer service-specific rates established by the Health Services Cost Review Commission; 2014–present: All-payer rates and global budgets</td>
<td>In effect</td>
</tr>
<tr>
<td>North Carolina state health plan Clear Pricing Project</td>
<td>North Carolina hospitals contracted by state employee plans</td>
<td>Average of 200% of Medicare rates</td>
<td>In effect for a state health plan with 3 hospitals and 25,000 other providers</td>
</tr>
<tr>
<td>Montana state health plan prices</td>
<td>Montana hospitals contracted by state employee plans</td>
<td>Negotiated between the state and each hospital, with an average of 234% of Medicare rates</td>
<td>In effect</td>
</tr>
<tr>
<td>S. 1129, Medicare for All Act of 2019, 2019b (Sanders)</td>
<td>Federal single-payer system for all U.S. residents</td>
<td>Fee schedule established with processes similar to Medicare’s</td>
<td>Proposed legislation</td>
</tr>
<tr>
<td>H.R. 1384 Medicare for All Act of 2019, 2019a (Jayapal)</td>
<td>Federal single-payer system for all U.S. residents</td>
<td>Hospital and facility global budgets; physician fee schedule taking into account Medicare rates</td>
<td>Proposed legislation</td>
</tr>
<tr>
<td>Program or Proposal</td>
<td>Scope</td>
<td>Rate Regulation</td>
<td>Status</td>
</tr>
<tr>
<td>---------------------</td>
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</tr>
<tr>
<td>H.R. 2452 Medicare for America Act of 2019, 2019b (DeLauro and Schakowsky)</td>
<td>Federal public program for all U.S. residents with an option to opt out</td>
<td>Higher of Medicare or Medicaid rates; in underserved areas, at least 110% of higher of Medicare or Medicaid rates</td>
<td>Proposed legislation</td>
</tr>
<tr>
<td>S. 3 Keeping Health Insurance Affordable Act of 2019, 2019a (Cardin)</td>
<td>Federal public option for the individual market</td>
<td>Medicare rates for 2020–2022; Secretary to set rates thereafter</td>
<td>Proposed legislation</td>
</tr>
<tr>
<td>S. 1261 / H.R. 2463, Choose Medicare Act, 2019b (Merkley/Richmond)</td>
<td>Federal public option for individual, large group, and small group markets</td>
<td>Between Medicare and average commercial rates paid by marketplace plans</td>
<td>Proposed legislation</td>
</tr>
<tr>
<td>S. 981 / H.R. 2000, Medicare-X Choice Act of 2019, 2019a (Bennet, Kaine/Delgado)</td>
<td>Federal public option for the individual market</td>
<td>Medicare rates; Secretary may increase rates by 25% for rural areas</td>
<td>Proposed legislation</td>
</tr>
<tr>
<td>H.R. 2085 / S. 1033 The CHOICE Act, 2019a (Schakowsky/Whitehouse)</td>
<td>Federal public option for the individual market</td>
<td>Secretary to negotiate rates; Medicare rates if unable to reach negotiated agreement</td>
<td>Proposed legislation</td>
</tr>
<tr>
<td>CO HB20-1349 Proposal for Affordable Health Care Option, 2020</td>
<td>State public option for the individual market</td>
<td>Base hospital payment rate at 155% of Medicare rates; 20% increase for critical access and independent hospitals, up to a 30% increase for hospitals with a Medicare and Medicaid patient share exceeding the statewide average, up to a 40% increase for hospitals determined to be efficient in managing underlying cost of care</td>
<td>Proposed legislation</td>
</tr>
</tbody>
</table>

**Capping rates**

<table>
<thead>
<tr>
<th>Source</th>
<th>Scope</th>
<th>Rate Regulation</th>
<th>Proposed by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kocher and Berwick, 2019</td>
<td>Hospitals</td>
<td>120% of Medicare rates</td>
<td>researchers</td>
</tr>
<tr>
<td>Skinner, Fisher, and Weinstein, 2014</td>
<td>Hospital and physicians</td>
<td>125% of Medicare rates</td>
<td>researchers</td>
</tr>
<tr>
<td>Chernew, Dafny, and Pany, 2020</td>
<td>Provider prices paid by commercial plans</td>
<td>5 times the 20th percentile of commercial prices for a given service and market, and price growth caps indexed to the Consumer Price Index (CPI) plus 1 or 2 percent</td>
<td>researchers</td>
</tr>
<tr>
<td>Progressive Policy Institute proposal to limit out-of-network payments</td>
<td>Out-of-network payments</td>
<td>175% of Medicare rates in 2022, declining to 125% of Medicare rates over 12 years</td>
<td>researchers</td>
</tr>
<tr>
<td>Council for Affordable Health Coverage proposal to limit out-of-network and emergency service payments</td>
<td>Out-of-network and emergency service payments</td>
<td>200% of Medicare rates in 2020, declining to 150% of Medicare rates over 5 years</td>
<td>researchers</td>
</tr>
<tr>
<td>Washington state public option (WA SB 5526, 2019)</td>
<td>Washington state providers contracted by the public option</td>
<td>160% of Medicare rates, and no less than 135% of Medicare rates for primary care physicians and no less than 100% of allowable costs for critical access or sole community hospitals</td>
<td>In effect with plans available in 19 counties</td>
</tr>
</tbody>
</table>
Program or Proposal | Scope | Rate Regulation | Status
--- | --- | --- | ---
Oregon Revised Statute (ORS) 243.256 and 243.879 Reimbursement methodology for payment to hospitals, undated- a and b. | Inpatient and outpatient services paid by the Oregon Public Employees Benefits Board and Oregon Educators Benefit Board | 200% of Medicare rates for in-network hospitals and 185% of Medicare rates for out-of-network hospitals | In effect
Roy, 2020 | Hospitals with greater than 15 percent market share in nonrural regions with HHI above 4,000 | Hospitals with greater than 15 percent market share in nonrural regions with HHI above 4,000 would be required to accept rates equal to or less than the median rate paid by Medicare Advantage in that region, or voluntarily divest holdings to bring the HHI below 4,000 | Proposed by researchers


**Key Policy Design Choices**

Policymakers could consider a variety of design choices for a rate regulation policy that could apply to hospital prices paid by private health plans. Key design choices include

- how to establish rates
- the scope of rate setting
- whether rates would be set or capped.

While rate setting would affect all hospitals, capping rates would affect only hospitals with rates exceeding the cap and would leave those with rates below the cap unaffected.

Rates could be established based on historical hospital revenue, Medicare rates, or commercial rates (either at baseline or, for options that would not regulate the entire commercial market, on an ongoing basis). State-based hospital rate setting programs have varied but typically established rate setting methodologies based on prior revenues and costs and include adjustments and rate limits (Murray and Berenson, 2015). In contrast, recent single-payer and public option proposals tie payment rates to a multiple of Medicare rates, and one federal public option bill would set rates between Medicare and commercial rates. The multiple or proportion between rates would need to be determined. Consequences of using a multiple of Medicare rates include imposing known distortions in Medicare prices, such as overpayment for specialist services and underpayment for primary care services, and applying rates developed for the Medicare population that may differ from costs for a wider population (Chernew, Dafny, and Pany, 2020). If prices were instead initially set between existing rates—e.g., between Medicare and average commercial rates—a process to adjust the rates going forward would need to be developed as average commercial rates change.

A rate regulation policy could apply to all private plans or to a more limited set of plans or markets, which would affect a smaller portion of hospital spending. For example, Maryland’s all-payer hospital rate setting system applies to all payers, including commercial payers, Medicaid,
and Medicare through a federal waiver (Murray, 2009). From 1983 to 2016, the West Virginia Health Care Authority set rates for nongovernmental payers, including commercial payers and self-pay patients (Sommers, White, and Ginsburg, 2012; West Virginia Health Care Authority, undated). Proposals for a public option include rate regulation that is typically limited to only the public health insurance plans on the individual market. The impacts of rate regulation in a public option would be much smaller than broader rate setting for all commercial plans because employer-sponsored plans cover many more people than individual market plans (157.3 million versus 19.6 million in 2018 [KFF, 2018]). However, the impact of rate regulation in a public option could be larger than estimated in this analysis, depending on details of a public option policy, such as whether it includes a requirement for provider participation that could put downward pressure on other commercial prices, or whether it was paired with other reforms that would expand public option enrollment. Another narrower application of rate setting would be to set rates for certain providers or markets. For example, price caps could be established for only certain types of payment, such as out-of-network payments\(^3\) or emergency room payments.

While rate setting would directly affect high prices and low prices, capping rates would only directly affect prices exceeding the cap. However, a cap could affect hospital-insurer negotiations that may affect prices below the cap. A price cap could be applied at the service level, i.e., limiting the prices of individual services that exceeded the cap.

**Policy Scenarios**

**Rate Setting**

We estimated the effects of setting hospital rates paid by private health plans:

- at 100 to 175 percent of Medicare rates
- between hospitals’ average commercial rate and Medicare rate.

We assessed multiples of Medicare rates that reflect a range similar to those in recent proposals involving rate setting. We included a scenario with rates set to 175 percent of Medicare rates, but we do not exceed this level because the weighted average commercial rate in our sample of hospitals is 173 percent of Medicare rates, meaning that rate setting beyond this level would lead to large increases in overall hospital revenue. Because Medicare rates include geographic adjustment factors, we set rates relative to the Medicare rate for each hospital. Similarly, the difference between Medicare and commercial rates varies for each hospital. Using blended rates between commercial and Medicare could be a way to transition toward Medicare rates over time, e.g., starting at 75 percent of commercial rates and 25 percent of Medicare rates and moving toward 100 percent of Medicare rates. While the commercial rates would be

\(^3\) Regulating out-of-network payments could affect in-network prices by influencing hospital-insurer price negotiations; see Duffy, Whaley, and White, 2020.
changing over time under rate setting, the relative rates could be determined from a baseline period prior to rate setting.

We assessed the effects if the above rates applied to

- all private plans
- a public option for individual health plans
- hospitals with a high market share in extremely concentrated markets.

In the first approach, the rates are set for all private plans, including employer-sponsored and individual market plans.

In the second approach, rate setting is limited to public option health plans. To generate spending estimates for rate setting in a public option, we scaled down the spending estimate for all private plans based on the share of private plan enrollees who were in individual market plans, which was 10.8 percent in 2018, including employer-sponsored and military plans (KFF, 2018), and then scaled down based on the share of individual market plan enrollees who are anticipated to enroll in a public option plan. This approach assumes that the relative sizes of employer versus individual market plans remains constant, which may vary in different public option proposals that could include other policy changes, such as changes to eligibility for marketplace tax credits. We assumed that public option enrollment is correlated with payment rates, given that payment rates affect premiums and cost-sharing requirements. Between 100 and 175 percent of Medicare rates, we assumed that public option enrollment accounts for 90 to 60 percent of current individual market enrollment, with higher enrollment in the public option when payment rates are lower, according to an extrapolation of a recent analysis of public option enrollment (Liu et al., 2020).

In the third approach, we identified hospitals in extremely concentrated markets working from thresholds proposed by Roy (2020). In particular, we assumed that rate setting applied to hospitals that (1) were in an HRR with an HHI above 4,000 points and (2) accounted for greater than 15 percent of hospital beds in the HRR. We assumed that hospitals with less than 15 percent market share in these HRRs would not be affected by rate setting.

**Capping Rates**

Capping rates is of interest to policymakers and, potentially, more appealing than rate setting because caps could target higher prices without raising lower prices. For example, capping at 200 percent of Medicare rates would reduce hospital spending, while rate setting at 200 percent of Medicare rates would reduce spending at some hospitals and raise spending at other hospitals, leading to a net increase in hospital spending overall.

In practice, capped rates would likely occur at the payer level or service level. Capping rates could restrict payments from each commercial payer to not exceed the cap. Alternatively, payment for each service could be restricted to a cap. However, in this analysis that relies on HCRIS data, we examine the impact of restricting each hospital’s average price (across all
commercial payers and all services) to a percentage of Medicare rates. This results in conservative estimates of capping rates at the payer or service level, as capping based on hospitals’ average price could leave some high-price services uncapped if a hospital has a mix of higher- and lower-priced services relative to Medicare that makes their average price below the threshold. In other words, the effect of capping rates in practice would likely be larger than the estimated effects in this analysis.

We estimated the effects of capping average commercial rates for each hospital at 100 percent to 200 percent of Medicare rates, which reflects multiples of Medicare rates similar to those in recent proposals for capped rates. We did not analyze policy options that would specifically focus on state employee health plans, given that each state plan operates differently and starts at a different level given current hospital price variation. We also did not consider out-of-network payment limits in this report because a recent RAND analysis previously did so (Duffy, Whaley, and White, 2020). Last, we did not assess caps tied to commercial rates, which were recently analyzed by Chernew, Dafny, and Pany (2020).

Estimated Effects on Hospital Prices and Spending

*Rate Setting*

Figure 3.1 shows the national average estimated prices paid by private plans for hospital services under rate setting scenarios with rates relative to Medicare. In the lowest-price scenario where commercial prices are set to 100 percent of Medicare rates for all private plans, the estimated average commercial payments are $14,010, which is a 41.7 percent decrease from the weighted average commercial rate in the status quo. In the highest-price scenario, where commercial prices are set to 175 percent of Medicare rates, the estimated average commercial payments are $24,518, which is a 1.9-percent increase from the weighted average commercial rate in the status quo.

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4 Duffy, Whaley, and White (2020) estimated that a limit of 125 percent of Medicare rates could reduce hospital spending by $108 billion to $124 billion, a limit of 200 percent of Medicare rates could reduce hospital spending by $23 billion to $81 billion, and looser limits based on average payments or charges would generate smaller savings or increase spending.
Figure 3.1. Estimated Average Commercial Hospital Prices Under Rate Setting Relative to Medicare

![Figure 3.1](image)

**NOTE:** The estimated changes in commercial prices paid to hospitals reflect the impact of setting commercial rates relative to Medicare rates for 4,034 nonfederal, short-stay hospitals in 2018. Prices are estimated as hospital revenue per discharge equivalent. The gray line shows the average hospital price paid by commercial plans in the status quo, weighted by discharge equivalents.

Figure 3.2 shows the estimated changes in spending under rate setting scenarios with rates relative to Medicare. Across the four scenarios in which 100 to 175 percent of Medicare rates are applied to all commercial plans, the estimated impacts on spending are as follows:

- If the rates apply to all commercial plans, the estimated changes in hospital spending range from a reduction of $236.6 billion to an increase of $36.1 billion. These spending impacts correspond to savings of 6.5 percent to an increase of 1.0 percent of national health spending. We estimate that spending would increase in the scenario with 175 percent of Medicare rates because, in the hospitals included in this analysis, the new price levels would exceed the weighted average commercial prices in the status quo, which is 173 percent of Medicare rates.
- If the rates apply only to public option health plans, the estimated effect on spending ranges from a $23.0 billion decrease to a $2.3 billion increase (a 0.6-percent decrease to a 0.1-percent increase in national health spending).
- If the rates apply only to hospitals with a high market share in extremely concentrated markets, the estimated change in hospital spending ranges from a $25.4 billion decrease to an $8.3 billion increase (a 0.7-percent decrease to a 0.2-percent increase in national health spending).
Figure 3.2. Estimated Change in Hospital Spending Under Rate Setting Relative to Medicare

NOTE: The estimated changes in hospital spending reflect the impact of setting commercial rates relative to Medicare rates for 4,034 nonfederal, short-stay hospitals in 2018.

Figure 3.3 shows the estimated average commercial hospital prices and changes in spending when prices are set as a blend of commercial and Medicare rates. The estimated average commercial payments grow from $14,010 when commercial rates are weighted at 0 percent to $21,540 when commercial rates are weighted at 75 percent. The blended rate with 0 percent of commercial rates is equivalent to 100 percent of Medicare rates, and the blended rate with commercial rates weighted at 75 percent roughly corresponds to 150 percent of Medicare rates.
NOTE: The estimated changes in commercial prices paid to hospitals reflect the impact of setting commercial rates equal to blended commercial and Medicare rates for 4,034 nonfederal, short-stay hospitals in 2018. Prices are estimated as hospital payments per discharge equivalent. The gray line shows the average hospital price paid by commercial plans in the status quo, weighted by discharge equivalents.

Figure 3.4 shows the estimated change in hospital spending when prices for all commercial plans are set as a blend of commercial and Medicare rates. The savings to aggregate spending when the blended rates are 0 percent of commercial rates (and 100 percent of Medicare rates) are $236.6 billion (6.5 percent of national health spending). When the blended rate is increased to 75 percent of commercial rates (and 25 percent of Medicare rates), the estimated reduction in hospital spending is $65.3 billion (1.8 percent of national health spending).
Figure 3.4. Estimated Change in Spending with Blended Commercial and Medicare Rates

![Graph showing estimated change in spending.]

NOTE: The estimated changes in hospital spending reflect the impact of setting commercial rates equal to blended commercial and Medicare rates for 4,034 nonfederal, short-stay hospitals in 2018.

Capping Rates

Figure 3.5 shows the estimated national average commercial hospital prices when the commercial rates are capped relative to Medicare rates. As aforementioned, the estimates reflect price caps on average hospital prices and, thus, are conservative estimates of price caps that could be applied to prices of individual services. In addition, we assume that there are no changes for hospitals with average prices below the cap. In this analysis, the hospital-level cap at 200 percent of Medicare rates affects 36.6 percent of hospitals, while the cap at 100 percent of Medicare rates affects 92.6 percent of hospitals. The estimated average prices are $13,662 to $22,219 when the rates are capped at 100 to 200 percent of Medicare rates.
Figure 3.5. Estimated Average Commercial Hospital Price with Rates Capped Relative to Medicare

![Graph showing estimated average commercial hospital price with rates capped relative to Medicare.]

NOTE: The estimated changes in commercial prices paid to hospitals reflect the impact of capping commercial rates relative to Medicare rates for 4,034 nonfederal, short-stay hospitals in 2018. Prices are estimated as hospital payments per discharge equivalent. The gray line shows the average hospital price paid by commercial plans in the status quo, weighted by discharge equivalents.

Figure 3.6 shows the estimated change in hospital spending when the rates are capped for all commercial plans, public option plans, and hospitals with a high market share in extremely concentrated markets. We estimate that a hospital-level cap applied to all commercial payers would reduce hospital spending by $246.6 billion (6.8 percent of national health spending) when the cap is 100 percent of Medicare rates. When the cap is increased to 200 percent of Medicare rates, the estimated reduction in hospital spending is $42.7 billion (1.2 percent of national health spending).
NOTE: The estimated changes in commercial prices paid to hospitals reflect the impact of capping commercial rates relative to Medicare rates for 4,034 nonfederal, short-stay hospitals in 2018. The blue bars show the estimated change when rates are capped for all commercial plans, the green bars show estimates when rates are capped for public option plans, and the purple bars show estimates when rates are capped for dominant hospitals that are in HRRs with an HHI above 4,000 points and accounted for greater than 15 percent of hospital beds in the HRR.

Other Considerations

The impact of rate regulation depends critically on the payment level. In addition to the payment level directly affecting the magnitude of savings, it also influences the extent to which providers would accept the rates and participate in a given plan. Historically, there has been substantial political opposition from provider associations to proposals that would reduce rates (Murray and Berenson, 2015). The opposition to state public option proposals suggests that the political feasibility of lower payment levels for all commercial payers is low. Furthermore, although a temporary shock, the COVID-19 pandemic has put substantial financial pressures on hospitals, which have already expressed concerns about low payment rates from public payers (AHA, 2020).

At a given payment level, capping rates could have a larger spending impact than rate setting because capping would not directly affect prices below the cap—although the presence of a cap could influence provider-insurer negotiations and alter prices below the cap—whereas rate setting could increase prices for hospitals below the designated payment level. Thus, capping rates would have different distributional implications compared with rate setting for hospitals.

Setting commercial rates relative to Medicare rates has different consequences for hospitals depending on their existing rates. The relationship between Medicare and commercial prices
varies across hospitals. Setting commercial rates to a multiple of Medicare prices could result in increased commercial payments for some hospitals. For the hospitals included in this analysis, setting commercial prices to 175 percent of Medicare rates resulted in increased spending overall. Setting rates between Medicare and commercial prices would prevent a rate setting policy from increasing hospital commercial prices.

A potential consequence of rate setting approaches is that they could lead to the overprovision or underprovision of hospital care if regulators set prices too high or too low. Although this analysis illustrates uniform rate setting levels across hospitals, differential rates could be set to guard against underprovision, particularly in underserved areas. For example, several proposals include payment bumps for rural areas or critical access hospitals. Entities determining rate changes over time could monitor access and quality metrics to assess whether appropriate care is provided.

In this analysis, we analyzed the effects of caps on average hospital rates across all services. However, focusing on average hospital prices masks variation in prices across services within a given hospital, which could receive high prices for some services and low prices for others. Service-specific caps would target individual services that are paid high prices by commercial plans. In Medicare, inpatient services are paid by diagnosis-related groups, and outpatient services are paid by ambulatory payment classifications. Whether the rate is pegged to Medicare or commercial rates, the unit of payment would need to be determined (Sommers, White, and Ginsburg, 2012). Another alternative to administratively setting rates would be to determine costs of services and set payment rates to align with the service cost plus a margin.
4. Price Transparency

Background

State and federal policymakers and regulators could make hospital prices more transparent to help facilitate the shifting of care toward less-expensive facilities and to increase pressure on hospitals to reduce their prices. While federal regulation already requires hospitals to disclose their list prices (also known as chargemasters) online, these prices do not necessarily reflect the rates that hospitals ultimately negotiate with commercial payers (known as transaction prices) (Wallack et al., 2020). Several different actors could leverage information on negotiated hospital rates to reduce the cost of care (Sinaiko, 2019; White et al., 2014):

1. Patients could use this information to shop for less-expensive providers.
2. Insurers that are paying relatively high prices in a given market could use this information to bargain for lower rates.
3. Employers could use this information to identify whether group health plan administrators are paying high rates, push them to bargain for lower prices as applicable, and redesign plan benefits to encourage greater use of low-cost providers.
4. Physicians could use this information to help patients choose high-value providers.
5. Policymakers could use this information to monitor health care markets and develop policy interventions.

Price transparency initiatives could build on existing efforts at the state level. As of January 2020, 18 states required all state-regulated payers to submit hospital prices to an All-Payer Claims Database (APCD), and eight of these states facilitated public access to this information through a consumer-friendly price-shopping tool (Berenson et al., 2020). For example, in New Hampshire—which has received recognition for its price-transparency infrastructure—residents have access to an online tool that allows them to compare estimated transaction prices across providers for a given insurer and procedure (Murray et al., 2020; New Hampshire Insurance Department and the University of New Hampshire Mobile Development Team, undated). As a result of the 2016 Supreme Court decision Gobeille v. Liberty Mutual, states are no longer allowed to require self-insured employer plans to submit data to APCDs (Calsyn, 2018). However, federal policymakers or regulators could grant states the authority to do so, and, in the interim, states could offer financial incentives for plans to submit data voluntarily (Calsyn, 2018).

Federal policymakers have also begun to push for greater price transparency. A recent bipartisan bill introduced in the Senate would create a federal APCD to collect data from self-

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5 As of 2020, three states—including California—were in the process of implementing an APCD, four states collected hospital price data from payers on a voluntary basis, and policymakers in at least 11 additional states have introduced APCD legislation (APCD Council, 2020).
insured plans and other payers (Gudiksen, 2019; Berenson et al., 2020). In January 2021, CMS began to require hospitals to publicly release payer-specific negotiated rates for all services and to do so in a consumer-friendly manner for a set of 300 shoppable services (albeit with a relatively modest $300 penalty per hospital per day for noncompliance) (CMS, 2019). The agency has also released a complementary final rule that would require insurers to publicly release negotiated rates for all covered services and to provide enrollees with cost-sharing estimates through an online price transparency tool (Appleby, 2021; CMS, 2020b). While it is possible that insurers may challenge this rule in court, a recently introduced Senate bill would enact it into law (Grassley, 2020; Keith, 2020).

Key Policy Design Choices

Policymakers have several options in terms of what information to disclose, whom to share it with, and how. One important design choice is the level of granularity to share. For instance, data derived from APCDs could report prices separately for each hospital and insurer, or they could provide average prices for a given hospital across insurers. While the former would paint a more complete picture of hospital prices and be more useful for consumers, the latter might be sufficient for plans to negotiate lower rates and could reduce the likelihood that hospitals in relatively concentrated markets use price information to collude with one another (White et al., 2014; Sinaiko, 2019; Cutler and Dafny, 2011).

The design of price-transparency tools will also have important implications for the effectiveness of disclosure in expanding price shopping. For example, it may be more useful for price transparency tools to list the cost of a given episode of care versus the cost of specific services that are provided during an episode and to provide estimates of patient cost-sharing requirements rather than the total transaction price (Sinaiko and Rosenthal, 2011).

Policy Scenarios

We estimated the effect of a policy that would require payers to report their rates to a state or federal APCD and would disclose hospital-specific and payer-specific rates to employers, health plans, policymakers, and patients, including through a consumer-friendly price-transparency tool. This policy would apply to all payers, including self-insured employer plans. We modeled two potential implications of this policy change: (1) a patient-driven response, in which patients use the price information to shop for lower prices and providers may reduce prices in response to patient price sensitivity, and (2) an employer-driven response, where employers use the price information to redesign provider networks to exclude the most expensive hospitals or steer patients to lower-cost hospitals through tiered networks or reference pricing benefit designs.

We modeled the patient-driven response based on the only peer-reviewed article, to our knowledge, that assesses the effect of using an APCD to publicly disclose hospital prices through a consumer-friendly transparency tool. Specifically, Brown (2019) evaluated the introduction of
New Hampshire’s HealthCost website, which allowed patients to obtain their estimated OOP costs and the total transaction price for a given procedure, hospital, and payer. The study found that New Hampshire’s price-transparency initiative reduced medical imaging prices by 4 percent after five years. A separate study estimated that 43 percent of total health care spending is for shoppable services and 34 percent is for shoppable outpatient services (Frost and Newman, 2016). Taking the product of these estimates, we assumed that using an APCD to publicly disclose hospital prices throughout the country would reduce hospital prices by approximately 1.4 to 1.7 percent.

We modeled the employer-driven response by analyzing the effect on prices and spending if care were to shift from expensive hospitals to hospitals with lower prices. This might occur, for example, if employers leveraged hospital price information to compel group health plans to exclude expensive hospitals from provider networks or to implement tiered network or reference pricing benefit designs. We considered this possibility by evaluating how spending would change if patients who received care at the most expensive hospital in a given HRR had instead received their care at the hospital with the median price or, under a more conservative modeling scenario, at the hospital with the 75th-percentile price. This would represent a consequential change in care, given the wide variation in hospital prices and the fact that hospitals with the highest commercial prices in their HRR accounted for a sizeable share (10.3 percent) of all discharges in 2018.

Estimated Effects on Hospital Prices and Spending

Figures 4.1 and 4.2 show the estimated effect of this policy option on average commercial prices and total spending by private plans for hospital services. Under our modeling scenario that focuses on patient-driven responses (i.e., assuming that commercial prices would decline by 1.4

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6 In a related article, Whaley (2019) evaluated the effect on provider prices of increased access to a price transparency tool among employer plan enrollees. Whaley found that increased access to the tool was associated with a decrease in prices for laboratory tests but did not have a statistically significant effect on prices for office visits. Scaling up the results suggests that providing universal access in a given health service area could yield a 1- to 4-percent decrease in prices for laboratory tests.

7 Although patients were the target audience of New Hampshire’s HealthCost website, anecdotal evidence suggests that health insurers used information from this website to negotiate for lower prices (Brown, 2019). In other words, our estimates based on the experience in New Hampshire encompass responses from both patients and insurers.

8 Prior research has found that implementing such benefit design approaches can decrease prices, spending, or both. For example, Gruber and McKnight (2016) found that the introduction of a financial incentive for Massachusetts state employees to join narrow network plans led to an 11.6–percentage point and a 4.2-percent decrease in total spending (or, through a back-of-the-envelope calculation, a 4.2 percent / 0.116 = 36-percent decrease in total spending among those who switched). Sinaiko, Landrum, and Chernew (2017) evaluated the decision of some employers in Massachusetts to switch their employees to a tiered network plan and found that the change led to a 5-percent reduction in total spending. Several studies have assessed reference pricing programs by two large employers—the California Public Employees Retirement System (CalPERS) and Safeway—finding spending reductions that ranged from 10.5 percent to 31.9 percent for a variety of diagnostic tests and surgical procedures (American Academy of Actuaries, 2018; Whaley, Brown, and Robinson, 2019).
percent to 1.7 percent according to prior research), we estimated that this policy option would lead to aggregate savings of $8.7 billion to $11.1 billion. Under our modeling scenario that focuses on employer-driven responses (i.e., assuming that volume shifts from the highest-priced to the median-priced or 75th percentile–priced hospital in a given HRR), we estimated that commercial prices would decrease by 2.2 percent to 4.7 percent, on average, yielding aggregate savings of $13.2 billion to $26.6 billion.

**Figure 4.1. Estimated Average Commercial Hospital Price Following Price Transparency Initiatives**

![Figure 4.1. Estimated Average Commercial Hospital Price Following Price Transparency Initiatives](image)

NOTE: The changes in commercial prices paid to hospitals reflect a range of estimated impacts for improving price transparency for 4,034 nonfederal, short-stay hospitals in 2018. Prices are estimated as hospital payments per discharge equivalent. The gray line shows the average hospital price paid by commercial plans in the status quo, weighted by discharge equivalents.
Figure 4.2. Estimated Change in Hospital Spending Following Price Transparency Initiatives

NOTE: The changes in hospital spending reflect a range of estimated impacts for improving price transparency for 4,034 nonfederal, short-stay hospitals in 2018.

Other Considerations

Although a major impetus for transparency initiatives is to facilitate price shopping among patients, some analysts have raised questions about the ability or willingness of patients to do so. For one, much of health care spending goes toward services that are not shoppable, such as emergency care (Frost and Newman, 2016; White and Eguchi, 2014). Even among services that are shoppable, patients may consider factors beyond price—such as provider quality or relationships with providers—that could dampen the effect of transparency on costs (Sinaiko and Rosenthal, 2011). Additionally, while many patients already have access to price transparency tools through their plans, prior research suggests that use has been low (Higgins, Brainard, and Veselovskiy, 2016). This may relate to the fact that health insurance can mute the incentive for patients to shop for low-cost providers (Sinaiko and Rosenthal, 2011). For example, enrollees would not be motivated to search for a low-cost provider if they were required by their plan to pay a flat copayment regardless of where they received their care. Recent research suggests that patients may be willing to shop for less-expensive providers when plans tie cost-sharing requirements to provider prices, such as through tiered network designs or reference pricing.\(^9\)

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\(^9\) See previous footnote. Indeed, Whaley, Brown, and Robinson (2019) did not find evidence that the introduction of a price-transparency tool increased shopping among enrollees in a large employer plan but did find that the subsequent introduction of reference pricing for laboratory and imaging tests led to large shifts toward less-expensive providers.
However, a relatively small share of plans have implemented these benefit designs (Claxton et al., 2019; Sinaiko, Alidina, and Mehrotra, 2019).

While disclosing prices could put pressure on expensive hospitals to lower their rates, it is also conceivable that transparency might lead hospitals to increase their prices in certain circumstances. First, price transparency could embolden low-cost providers to bargain for higher prices (Sinaiko and Rosenthal, 2011). Second, price transparency could reduce the willingness of providers to offer discounts to some insurers, given that other insurers may demand the same rates when prices are disclosed (Cutler and Dafny, 2011). Third, in relatively concentrated markets, price transparency could facilitate tacit collusion between rival hospitals. Finally, absent the availability of reliable and consumer-friendly information on provider quality, some patients may view prices as an indicator of quality, which would reduce the incentive of hospitals to lower their rates (Sinaiko and Rosenthal, 2011).
5. Increasing Competition

Background

State and federal policymakers and regulators can indirectly reduce hospital prices paid by commercial payers by fostering greater competition in health care markets. Table 5.1 summarizes approaches that would impede consolidation in hospital markets.

Table 5.1. Proposals for Increasing Hospital Market Competition

<table>
<thead>
<tr>
<th>Proposal</th>
<th>Description</th>
<th>Source</th>
</tr>
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<tbody>
<tr>
<td>Prevent horizontal integration</td>
<td>Federal policymakers could increase funding for the DOJ and FTC, thereby enhancing the ability of these agencies to review and challenge hospital mergers and engage in other antitrust enforcement activities.</td>
<td>Aaron et al., 2019; Gaynor, 2020; Gee and Gurwitz, 2018; Slaughter, 2019</td>
</tr>
<tr>
<td>Increase funding for antitrust enforcement</td>
<td>Increase funding for antitrust enforcement</td>
<td>Gaynor, 2020; Gee and Gurwitz, 2018; Slaughter, 2019</td>
</tr>
<tr>
<td>Expand the standing of antitrust agencies in court</td>
<td>Expand the standing of antitrust agencies in court, For example, federal policymakers could decrease the level of evidence required for antitrust regulators to block a merger.</td>
<td>Gaynor, 2020; Gee and Gurwitz, 2018; Slaughter, 2019</td>
</tr>
<tr>
<td>Expand the definition of unfair methods of competition</td>
<td>Expand the definition of unfair methods of competition, the FTC could use its existing authority to expand the scope of unfair methods of competition, which could encourage courts to consider more factors (e.g., the effect of cross-market consolidation) when reviewing challenges to hospital mergers.</td>
<td>Gee and Gurwitz, 2018</td>
</tr>
<tr>
<td>Create a specialized court to hear antitrust cases</td>
<td>Create a specialized court to hear antitrust cases, Federal policymakers could establish a specialized court to focus on antitrust cases. Judges would develop expertise in antitrust, leading to a stronger review of antitrust cases.</td>
<td>Gaynor, 2020</td>
</tr>
<tr>
<td>Increase oversight of cross-market mergers</td>
<td>Increase oversight of cross-market mergers, Research suggests that cross-market mergers can result in higher prices (e.g., when hospital systems are negotiating with payers, such as state employers plans, that also operate across market boundaries), though regulators do not generally challenge them (Dafny, Ho, and Lee, 2019; Lewis and Plum, 2017).</td>
<td>Gaynor, 2020</td>
</tr>
<tr>
<td>Establish an agency to monitor health care markets</td>
<td>Establish an agency to monitor health care markets, Federal or state policymakers could establish an agency to monitor health care markets, draw attention to consolidation and other antitrust concerns, and organize responses.</td>
<td>Gaynor, 2020</td>
</tr>
<tr>
<td>Eliminate COPAs</td>
<td>Eliminate COPAs, Some states allow merging hospitals to enter into COPAs, which protect them from antitrust scrutiny at both the state and federal levels in exchange for state oversight following consolidation. However, it is unclear whether states have the capacity to monitor hospitals on an ongoing basis. States could strengthen antitrust scrutiny by eliminating this practice.</td>
<td>Aaron et al., 2019; Gaynor, 2020; Azar, Mnuchin, and Acosta, 2018; Slaughter, 2019</td>
</tr>
<tr>
<td>Facilitate market entry</td>
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<tr>
<td>Proposal</td>
<td>Description</td>
<td>Source</td>
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<td>Reform or eliminate CON laws</td>
<td>State CON laws require approval from a state board before a new health care facility can enter a market or an existing facility can expand or offer new services (Butler, Rakotoniaina, and Fournier, 2020). State policymakers could facilitate market entry and competition by eliminating these laws or narrowing their scope.</td>
<td>Aaron et al., 2019; Gaynor, 2020; Gee and Gurwitz, 2018; Azar, Mnuchin, and Acosta, 2018</td>
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<tr>
<td>Challenge anticompetitive practices</td>
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<tr>
<td>Grant the FTC greater purview over nonprofit hospitals</td>
<td>The FTC does not currently have authority over anticompetitive practices among nonprofit hospitals, leaving scrutiny to the DOJ and state regulators. Federal policymakers could grant the FTC this authority.</td>
<td>Gaynor, 2020; Azar, Mnuchin, and Acosta, 2018; Slaughter, 2019</td>
</tr>
<tr>
<td>Restrict anticompetitive contract clauses</td>
<td>Contracts between hospitals and insurers may include provisions that hamper the ability of insurers to negotiate for lower prices or nudge members to use cheaper facilities (e.g., antitiering and antisteering provisions, all-or-nothing requirements, and most-favored nation status) (Gudiksen et al., 2020). State or federal policymakers could prohibit these requirements.</td>
<td>Gaynor, 2020; Gee and Gurwitz, 2018; S.B. 1895, 2019c</td>
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<tr>
<td>Prevent or discourage vertical integration</td>
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<tr>
<td>Increase federal oversight</td>
<td>Antitrust scrutiny has largely focused on horizontal mergers and acquisitions, although recent research suggests that vertical integration between hospitals and other providers has also led to an increase in hospital prices. State and federal policymakers and regulators could increase competition by bringing new challenges to vertical integration (Gee and Gurwitz, 2018; King and Fuse Brown, 2016a).</td>
<td>Gee and Gurwitz, 2018</td>
</tr>
<tr>
<td>Expand premerger reporting requirements</td>
<td>Federal regulation does not require providers to report mergers and acquisitions if the transaction value falls below a certain amount ($94 million in 2020), which applies to the vast majority of physician acquisitions (Capps, Dranove, and Ody, 2017; FTC Premerger Notification Office Staff, 2020). Federal policymakers can increase antitrust scrutiny by lowering reporting thresholds. States that have not already done so may establish their own requirements.</td>
<td>Gaynor, 2020; Slaughter, 2019</td>
</tr>
<tr>
<td>Expand site-neutral payments</td>
<td>Medicare payment rates are sometimes greater when a given service is provided in a hospital versus a physician office, creating an incentive for vertical integration. Federal policymakers could reduce this incentive by aligning Medicare payments across sites of service. State policymakers could do the same for Medicaid payment rates.</td>
<td>Aaron et al., 2019; Gaynor, 2020; Gee and Gurwitz, 2018; Azar, Mnuchin, and Acosta, 2018</td>
</tr>
<tr>
<td>Reform the Section 340B program</td>
<td>The Section 340B program allows hospitals serving vulnerable populations to obtain discounts on pharmaceuticals, creating an incentive for physicians who administer costly drugs to join hospital staffs. Federal policymakers could reform this program, such as by providing the discounts based on a given patient’s socioeconomic status rather than on where they receive care.</td>
<td>Gaynor, 2020</td>
</tr>
<tr>
<td>Strengthen insurers’ relative bargaining power</td>
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<tr>
<td>Reevaluate or eliminate any willing provider (AWP) laws</td>
<td>State AWP laws oblige insurers to accept any provider into their network, thereby eliminating the incentive for providers to compete for network inclusion on the basis of price. State policymakers could reevaluate or eliminate these laws.</td>
<td>Aaron et al., 2019; Gaynor, 2020; Azar, Mnuchin, and Acosta, 2018</td>
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One set of policy options would do so by strengthening the ability of antitrust and regulatory agencies to challenge horizontal mergers and acquisitions. Among other options at the federal level, legislators could increase funding for antitrust enforcement; amend antitrust laws to enhance the ability of regulators to challenge mergers and acquisitions in court (e.g., by decreasing the level of evidence required to block a merger); or establish specialized antitrust courts, where judges would develop the expertise needed to effectively weigh arguments against consolidation (Aaron et al., 2019; Gaynor, 2020; Gee and Gurwitz, 2018; Murray, Delbanco, and King, 2021; Slaughter, 2019). Among other options at the state level, policymakers could eliminate certificates of public advantage (COPAs) in the 13 states that authorize them. COPAs protect hospitals from antitrust scrutiny at both the state and federal levels in exchange for state oversight following consolidation, though critics question whether states have the capacity to monitor hospitals on an ongoing basis (Aaron et al., 2019; Gaynor, 2020). Emerging evidence suggests that the antitrust immunity granted by COPAs leads to higher prices (Garmon and Bhatt, 2020).

In addition to reducing consolidation in hospital markets, states could also facilitate market entry by eliminating certificate of need (CON) laws. CON laws require approval from a state board before a new health care facility can enter a market or an existing facility can expand or offer new services (Butler, Rakotoniaina, and Fournier, 2020). As of 2020, 35 states continued to operate a CON program or something akin to one, and 29 of these states included short-term facilities in their purview (National Conference of State Legislatures, 2019; Rakotoniaina and Butler, 2020). Repealing state CON laws could increase market competition in some instances by reducing barriers for new market entrants, though it could also reduce market competition in other instances by inhibiting the ability of states to constrain the growth of dominant providers (Berenson et al., 2020). Indeed, one recent study found that CON laws were associated with increases, rather than decreases, in hospital competition (Paul, Ni, and Bagchi, 2019).

Although antitrust scrutiny has largely focused on horizontal mergers and acquisitions, state and federal policymakers and regulators could also increase competition by challenging or discouraging vertical integration between hospitals and other providers. The share of physician practices owned by hospitals has increased substantially over the past few years, rising from 14

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10 States vary in terms of the type of activity that can require a CON review. Several states have waived CON requirements during the coronavirus disease 2019 pandemic (Butler, Rakotoniaina, and Fournier, 2020).

11 The six remaining states focus exclusively on long-term facilities, such as nursing homes.
percent in 2012 to 31 percent in 2018 (Physicians Advocacy Institute, 2019). Recent research suggests that this trend has had anticompetitive effects that have led to increases in hospital prices (Baker, Bundorf, and Kessler, 2014). State and federal antitrust regulators could use existing authority to more aggressively challenge vertical integration (Gee and Gurwitz, 2018; King and Fuse Brown, 2016a). Both state and federal policymakers could support greater oversight of vertical integration by requiring hospitals to notify regulators of proposed acquisitions that fall below current reporting requirements (Gaynor, 2020; Slaughter, 2019). Finally, legislators could reform federal policies that may currently incentivize physicians to become affiliated with hospitals by providing greater reimbursements for services or larger discounts for drugs when administered at hospitals as opposed to physician offices (Aaron et al., 2019; Azar, Mnuchin, and Acosta, 2018; Gaynor, 2020; Gee and Gurwitz, 2018).

In markets that remain concentrated, state and federal policymakers could increase competition by restricting the ability of dominant hospitals to exercise their market power. For example, state or federal policymakers could prohibit hospitals and insurers from entering into contracts with antitiering or antisteering provisions, which prevent insurers from encouraging their members to use other, potentially lower-cost facilities (Gaynor, 2020; Gee and Gurwitz, 2018; S.B. 1895, 2019c). Policymakers could also restrict the use of other contract provisions that may hamper the ability of insurers to negotiate for lower prices or nudge members to use cheaper facilities, such as all-or-nothing requirements (which obligate insurers to contract with every member of a provider organization), and “most-favored nation” status (which requires hospitals to offer an insurer rate at or below the prices they charge other insurers) (Gee and Gurwitz, 2018; Gudiksen et al., 2020).

Policy Scenarios

Predicting the effect of policy reforms on the competitiveness of health care markets is difficult. For example, while some proposals could lead regulators to challenge a greater number of mergers and acquisitions, the effectiveness of such an approach would ultimately depend on the discretion of the state and federal judges who would be reviewing new cases.

Instead of estimating the effect of a specific proposal, we considered scenarios in which a bundle of policy reforms would lead to substantial decreases in hospital market concentration. The reforms could include preventing future consolidation, limiting anticompetitive practices, or breaking up existing hospital systems. We modeled different scenarios based on changes to the

---

12 In January 2020, the DOJ and FTC released proposed updates to agency guidelines relating to vertical mergers, though some analysts have argued that these changes would not substantially expand challenges to hospital acquisitions of physician practices (Greaney and Scheffler, 2020).
hospital HHI at the HRR level. The HHI is a commonly used measure of market concentration that ranges from approximately zero (perfect competition) to 10,000 (pure monopoly) (DOJ and FTC, 2010). The DOJ and FTC define an HHI below 1,500 points as unconcentrated, an HHI between 1,500 and 2,500 as moderately concentrated, and an HHI above 2,500 as highly concentrated (DOJ and FTC, 2010). The competition scenarios are as follows:

- **HHI decrease of up to 1,000 points.** We first evaluated a scenario where the HHI would decrease (1) by 1,000 points in highly concentrated markets (where the HHI is greater than 2,500) and (2) to 1,500 in moderately concentrated markets (i.e., a decrease of up to 1,000 points in markets where the HHI is between 1,500 and 2,500). A 1,000-point decrease reflects the difference between the upper bound for an unconcentrated market (1,500) and the upper bound for a moderately concentrated market (2,500).

- **HHI decrease to 1,500.** We then analyzed a scenario where the HHI would decrease to 1,500 in all moderately and highly concentrated markets. This change would be larger in scope than the first scenario, as the HHI would decrease by more than 1,000 points—and by up to 8,500 points—in highly concentrated regions.

HRR-level hospital HHIs would decrease by an average of 801 and 2,019 points under the first and second scenarios, respectively (or 581 and 1,162 points when weighted by the number of discharges). These changes represent a sizable increase in market competition, e.g., when compared with the 1,000-point difference between the upper threshold for an unconcentrated and moderately concentrated market. Figures 5.1 and 5.2 show the distribution of HRR-level hospitals at baseline (the status quo) and in each policy scenario. Although the magnitude of the change in both scenarios would be large, many hospital markets would still be highly concentrated under the first scenario (Figure 5.1).

---

13 HHI is defined as the sum of the square of market shares of all competing firms in a market (DOJ and FTC, 2018). We relied on HCRIS data to estimate the HHI for hospitals in each HRR. Our sample included the 4,268 nonfederal, short-stay hospitals that reported HCRIS cost data in 2018 (i.e., we did not apply the additional sample restrictions that we imposed when generating price and spending estimates, as detailed in Chapter 2). We calculated market shares by dividing the number of beds for a given hospital or hospital system by the total number of beds in a given HRR. We treated hospitals that were part of the same system in a given HRR as a single unit when calculating market shares, using definitions of hospital systems from the AHRQ “Compendium of US Hospital Systems” database (AHRQ, 2019).

14 To put these numbers in perspective, one paper estimated that the mean HHI in metropolitan statistical areas (MSAs) weighted by MSA population increased by 921 points from 1987 through 2006, a period of significant consolidation in hospital markets (Gaynor and Town, 2011). Another paper estimated that the unweighted mean HHI in MSAs increased by about 313 points from 2010 through 2016 (Fulton, 2017), which was also a period of rapid consolidation (Gaynor, 2020). In our data, the mean MSA-level HHI was greater than the mean HRR-level HHI.
Figure 5.1. Hospital Market Concentration Across HRRs at Baseline and with HHI Decreases of up to 1,000 Points

NOTE: The overlapping histograms show the distribution of HHIs across the set of HRRs containing the 4,034 nonfederal, short-stay hospitals in 2018. The purple bars show the baseline HHI in 2018, and the green bars show the resulting distribution when the HHI decreases (1) by 1,000 points in highly concentrated markets (where the HHI is greater than 2,500) and (2) to 1,500 in moderately concentrated markets (i.e., a decrease of up to 1,000 points where the HHI is between 1,500 and 2,500). The blue vertical line shows the cutoff between unconcentrated and moderately concentrated markets (HHI = 1,500), and the red vertical line shows the cutoff between moderately concentrated and highly concentrated markets (HHI = 2,500).
Figure 5.2. Hospital Market Concentration Across HRRs at Baseline and with HHI Decreases to 1,500

NOTE: The overlapping histograms show the distribution of HHI across the HRRs containing the 4,034 nonfederal, short-stay hospitals in 2018. The purple bars show the baseline HHI in 2018, and the green bars show the resulting distribution when HHI decreases to 1,500 (i.e., the upper bound for an unconcentrated market) in regions above that level (i.e., moderately and highly concentrated markets). The blue vertical line shows the cutoff between unconcentrated and moderately concentrated markets (HHI = 1,500), and the red vertical line shows the cutoff between moderately concentrated and highly concentrated markets (HHI = 2,500).

A key area of uncertainty is how responsive commercial prices would be to a change in hospital market concentration. To reflect this uncertainty, we generated estimates using a range of assumptions regarding the elasticity of prices with respect to HHI. In particular, we assumed that the percentage decrease in prices in a given HRR would equal 0.05, 0.10, or 0.36 times the percentage decrease in HHI. We derived these estimates from a recent paper that related commercial prices with changes in HHI and with hospital mergers and acquisitions that occurred between 2007 and 2011 (Cooper et al., 2019). Although the literature shows a range of estimates, we focused on this paper because it has been widely cited, uses relatively recent data, and incorporates information from many regions and time periods, in contrast to case studies that focus on a single hospital merger. Another recent analysis found a similar relationship between hospital prices and HHI (Arnold and Whaley, 2020).\(^{15}\) Appendix A includes a review of the literature relating hospital prices with HHI and with hospital mergers and details the substantial level of uncertainty involved when attempting to translate this literature into a modeling assumption.

\(^{15}\) One of the authors shared this unpublished estimate by email.
Estimated Effects on Hospital Prices and Spending

Figures 5.3 and 5.4 show the estimated changes in commercial prices and total spending by private plans for hospital services under the two competition scenarios. Under the scenario where HHI would decrease by up to 1,000 points, we estimate that average commercial payment rates would decrease by 1.0 to 7.0 percent, yielding aggregate savings of $6.2 to $43.8 billion. Under the scenario where HHI would decrease to 1,500, we estimate that average commercial payment rates would decrease by 1.6 to 11.2 percent, yielding aggregate savings of $9.9 billion to $68.9 billion. This wide range of estimates highlights the significant level of uncertainty regarding how responsive commercial prices would be to a change in hospital market concentration.

We estimate that average commercial prices would remain well above Medicare rates under each of our modeling scenarios. For example, under the scenario where HHI would decrease to 1,500 in moderately and highly concentrated regions, we estimate that average commercial rates would decrease from 178 percent of Medicare rates among affected hospitals to somewhere between 149 and 172 percent of Medicare rates (depending on the elasticity). It is conceivable that decreasing commercial prices closer to Medicare rates would require a more radical change in market competition than modeled here. It is also possible that our estimates may understate the effect of increases in market competition, given the substantial level of uncertainty regarding the responsiveness of commercial prices (as detailed in Appendix A).

16 For purposes of comparison, we estimated that commercial prices are 162 percent of Medicare rates, on average, in regions that currently have an HHI ranging from 1,000 to 1,500. Nonetheless, to the extent that the HRR-level HHI is an imperfect measure of market competition, some regions that are currently under 1,500 might not necessarily be competitive.
Figure 5.3. Estimated Average Commercial Prices Following Changes in Market Concentration

NOTE: The changes in commercial prices paid to hospitals reflect a range of estimated impacts for increasing competition among for 4,034 nonfederal, short-stay hospitals in 2018. Prices are estimated as hospital payments per discharge equivalent. The gray line shows the average hospital price paid by commercial plans in the status quo, weighted by discharge equivalents.

Figure 5.4. Estimated Change in Hospital Spending Following Changes in Hospital Market Concentration

NOTE: The changes in hospital spending reflect a range of estimated impacts for increasing competition among 4,034 nonfederal, short-stay hospitals in 2018.
Other Considerations

Several proposals aim to prevent consolidation in hospital markets but do not address the substantial level of concentration that already exists in many regions of the country (see Figure 5.5). Policymakers could conceivably break up existing hospital systems, though doing so, in many cases, could be both politically challenging and operationally complex and could create disruptions in patients’ care. For example, in one prominent merger case, an administrative law judge initially ordered that Evanston Northwestern Healthcare Corporation divest from Highland Park Hospital, but the FTC ultimately left the merger intact, noting that breaking up the hospital system would disrupt care (Marjoras, 2007). Another approach that may be more feasible would be to facilitate market entry by repealing state CON laws. However, the extent to which repealing CON laws would strengthen market competition, if at all, is uncertain.

Policymakers could implement price regulation as a backstop in scenarios where significant levels of hospital market concentration persist (Glied and Altman, 2017). This could include broadly capping commercial prices for all hospitals or more narrowly capping prices for dominant hospitals in highly concentrated markets (see Chapter 3). Courts have, at times, taken a more tailored approach, allowing providers to merge under the condition that they restrict growth in prices or margins, though such an approach may be challenging in practice (e.g., given the administrative costs of this piecemeal approach) (Berenson et al., 2020). In addition to placing direct limits on hospital prices, regulatory interventions could also indirectly constrain prices by reducing the appeal of mergers and acquisitions.

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17 In our sample, 63.3 percent of HRR-level hospital markets were very concentrated, i.e., had an HHI greater than or equal to 2,500. Studies using other geographic definitions of hospital markets suggest that concentration may be even more pervasive. For example, Fulton (2017) found that 90 percent of hospital markets are very concentrated when defined at the MSA level.

18 None of the policy proposals that we reviewed recommended this option. However, one joint report from the Brookings Institution and American Enterprise Institute suggested that regulators study this option (Antos and Rivlin, 2019). King and Fuse Brown (2016b) suggest that regulators consider breaking up hospital systems, both to increase market competition directly and to discourage future consolidation.

19 The FTC agreed that the merger had violated Section 7 of the Clayton Act but noted that “a critical improvement was made to Highland Park after the merger was consummated (namely, the development and implementation of a cardiac surgery program)” and that “a retrospective challenge . . . was made after [this] key improvement had already been made” (Rosch, 2008, p. 11). Rather than mandating that Evanston Northwestern Healthcare divest from Highland Park Hospital, the FTC required that the entities establish separate negotiating teams to encourage price competition (Rosch, 2008).
Figure 5.5. Hospital Market Concentration, by Hospital Referral Region

SOURCE: Authors' analysis using HCRIS data.
NOTE: The colors depict hospital market HHI by HRR. Areas in white are not covered by an HRR. Based on the DOJ and FTC guidelines, unconcentrated markets have an HHI below 1,500, moderately concentrated markets have an HHI between 1,500 and 2,500, and highly concentrated markets have an HHI above 2,500 (DOJ and FTC, 2010).
6. Other Effects of Reducing Hospital Prices

While the prior chapters focus on the effects of various policy options on hospital prices and spending, these changes would also have secondary effects on other outcomes of interest, including plan premiums; hospital margins, closures, and access to care; hospital employment and wages; and quality. In this chapter, we review potential implications for each of these outcomes. We generally focus on the effects of rate regulation and competition, given the limited evidence base for price transparency options.

Premiums

A central issue from the perspective of the commercially insured population is the extent to which health plans would share savings from reduced provider prices with enrollees. If plans were to pass all savings on to enrollees by lowering premiums, then setting commercial rates at 100 percent of Medicare rates—i.e., the largest policy change in this report—would yield an estimated premium reduction of $1,085 per commercially insured individual, on average. However, insurers may pass only a portion—or none—of the savings back to enrollees. The level of pass-through may vary by the structure and competitiveness of a given health insurance market. For example, consolidation of insurers has led to higher premiums (Dafny, Duggan, and Ramanarayanan, 2012; Dafny, Gruber, and Ody, 2015), suggesting that other factors may limit any pass-through. As a result of the Affordable Care Act, private insurers are required to spend at least 80 percent or 85 percent of plan premiums on medical care (though this provision does not apply to self-insured plans) (CMS, undated; KFF, 2012). A hospital price reduction that causes plan payments to fall below these thresholds would trigger rebates for enrollees (CMS, undated). In the context of employer-sponsored insurance (ESI), a recent RAND working paper found that increases in hospital payment rates corresponded to decreases in wages of a similar magnitude among ESI enrollees who are not health care workers (Arnold and Whaley, 2020), suggesting that these enrollees could benefit from reductions in hospital prices. In scenarios where employers do not fully pass ESI premiums onto workers in the form of lower wages, constraining health care costs would relieve pressure on employers and could therefore, for example, lead to greater employment (Sood, Ghosh, and Escarce, 2009).

20 We obtained this estimate by dividing the estimated reduction in spending among commercial payers if prices were at 100 percent of Medicare rates ($236.6 billion in 2018) by the estimated number of commercially insured individuals according to a Census Bureau report (217.8 million in 2018) (Berchick et al., 2019).
Hospital Margins, Closures, and Access to Care

Without adjustments to hospitals’ costs, reductions in prices would reduce margins and put more pressure on hospitals to close, which would, in turn, affect access to care. In 2018, hospitals were in a strong financial position, with total hospital margins of 6.8 percent on average across all payers (MedPAC, 2020). However, margins for Medicare patients were –9.3 percent, meaning that many hospitals would operate at a loss if commercial rates were set at Medicare prices and there were no accompanying changes to their operating costs.

Hospitals may offset lost revenue from commercial price reductions, in part, by decreasing their operating costs, e.g., by reducing employee salaries, changing the mix of workers, reducing investments in infrastructure and new technologies, or eliminating unprofitable lines of service (Dranove, Garthwaite, and Ody, 2013). Prior research suggests that hospitals have done so over time in response to cuts in Medicare prices (Bazzoli et al., 2004; Feder, Hadley, and Zuckerman, 1987; Hadley, Zuckerman, and Feder, 1989; Wu and Shen, 2014). In contrast, prior research indicates that hospital mergers have led to decreases in costs, perhaps by achieving economies of scale (Neprash and McWilliams, 2019; Schmitt, 2017). In other words, policy changes that increase hospital market competition could lead to both lower prices and increased operating costs. It is, therefore, possible that some hospitals would not survive in a more competitive market. Some hospitals may have to change their underlying cost structure, which could lead to changes in care or access.

Hospital Employment and Wages

Hospitals could respond to reductions in commercial prices by laying off workers, changing the labor mix, or reducing wages, though the extent to which this occurs would likely vary across policies that regulate rates and enhance competition. For example, previous research has found that hospitals have responded to cuts in Medicare rates by reducing staffing expenses and firing employees (Bazzoli et al., 2004; Lindrooth et al., 2006). In contrast, one recent study found that market consolidation has led to reductions in wages—perhaps because hospitals have gained leverage in salary negotiations—without having a statistically significant effect on employment, implying that policies that increase market competition could benefit hospital employees (Prager and Schmitt, 2021). The precise effect of policy changes on staffing and wages could have

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21 This work stands in contrast to claims that hospitals respond to Medicare payment cuts by increasing commercial prices, known as cost shifting (White and Wu, 2014). A review of the literature concluded that most studies have found either no evidence or modest levels of cost shifting (Frakt, 2011).

22 The impact of reductions in hospital prices paid by private health plans is more difficult to study, as there have been few systematic changes in commercial prices. However, recent large-scale changes in hospital revenue illustrate the potential impact of price reductions on hospital finances and staffing. In a study of hospital response to the financial shock of the 2008 stock market collapse, Dranove, Garthwaite, and Ody (2013) found that hospitals reduced infrastructure investment and provided fewer unprofitable services. Similarly, many hospitals have laid off or furloughed staff following the onset of the 2019 coronavirus pandemic (Paavola, 2020).
widespread implications, given that there were about 6.6 million hospital workers in the United States as of January 2020 (U.S. Bureau of Labor Statistics, 2020). Moreover, the specific changes in staffing mix and layoffs could have implications for hospital surge capacity to address the COVID-19 pandemic and other emergency situations.

Quality

The effect of the policy options on hospital quality may also differ across approaches that would regulate rates versus increase market competition. In the context of rate regulation, one recent working paper provides evidence suggesting that hospitals would decrease investments in quality in response to reduced prices (Garthwaite, Ody, and Starc, 2020). A handful of studies have evaluated the effect of Medicare price reductions on patient outcomes. Two studies found that Medicare payment decreases resulted in increases in hospital mortality rates (Shen, 2003; Wu and Shen, 2014), though another study did not find a statistically significant association (Seshamani, Schwartz, and Volpp, 2006).

Increasing the competitiveness of health care markets could conceivably lead to an improvement or an erosion in the quality of care, though research to date has not generally provided evidence of the latter. On the one hand, competitive pressures might encourage hospitals to invest in quality as a means of attracting patients. This effect may be particularly pronounced for hospitals with a large volume of Medicare patients, for whom prices are set administratively (Gaynor, Ho, and Town, 2015). On the other hand, competitive pressures could also lead hospitals to focus less on quality if they compete primarily on the basis of price (Gaynor, Ho, and Town, 2015). Increases in competition could also lead to lower quality to the extent that there are significant economies of scale associated with large hospitals or health systems (i.e., in less competitive markets). For example, some argue that large integrated health systems, such as Kaiser Permanente or Geisinger Health System, may be able to provide high-quality care, in part, by facilitating coordination across providers. Despite this theoretical ambiguity, research has not generally found evidence that market consolidation leads to improvements in quality (Gaynor, Ho, and Town, 2015; Neprash and McWilliams, 2019). For example, one recent study found that hospital mergers and acquisitions occurring from 2009 through 2013 were associated with slightly worse patient experience and no statistically significant changes in readmission or mortality rates (Beaulieu et al., 2020).

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23 Economic theory suggests that increases in competition will lead to unambiguous improvements in quality when prices are set administratively (e.g., as is the case in the Medicare program) but may lead hospitals to invest more or less in quality when prices are set by the market (depending, for example, on relative changes in responsiveness of consumer demand to changes in price and quality) (Gaynor, Ho, and Town, 2015).
7. Conclusion

In this analysis, we evaluated three policy options designed to reduce the prices (or rates) that private health plans pay to hospitals: regulating prices, improving price transparency, and increasing competition among hospitals. A key challenge for price regulation would be determining the appropriate level for setting or capping commercial rates, particularly for the commercial population, which has different underlying costs of care than the Medicare population. We estimate that setting or capping commercial rates close to Medicare rates would yield the largest reductions in hospital prices. But reducing hospital prices would need to be weighed against potential adverse effects of widescale rate regulation, including the possibility of hospital closures, reductions in hospital employment and wages, and erosion of hospital investments in care quality—all of which would vary depending on the level at which rates are set. A policy change of this magnitude would also likely face substantial opposition from provider groups. We analyzed price changes at a specific point in time, but policies could be phased in over time to allow for a gradual transition in prices, which could help mitigate political opposition. Additionally, limiting the scope of these policies—for example, by using higher rates or by restricting rate regulation to a public option or highly concentrated hospital markets—would have smaller effects on overall hospital spending and could be more politically feasible. However, in several states, proposals for public options that would regulate rates in a relatively small portion of private health plans have met extensive opposition from provider groups.

Policy options that would increase hospital price transparency and market competition might face fewer political challenges and could lower prices without necessarily reducing quality of care, but we estimate that the savings from these policies would be much smaller than under aggressive rate regulation. We found that spending reductions under these policies would be similar to spending reductions under less-stringent rate regulation options (e.g., with higher rates or caps or limited to specific payers or hospitals). We estimate that expanding price transparency would yield relatively modest savings. In addition, the potential impact of price transparency initiatives is more uncertain—the evidence base for this approach is relatively limited—and it may take time before these initiatives yield savings. Given how concentrated today’s hospital markets are, policymakers would need to radically restructure hospital markets for prices to approach competitive levels; this approach may also require transition periods.

The COVID-19 pandemic has dramatically altered the short-term practical and political feasibility of the policy options in this report. During the pandemic, hospitals have experienced significant reductions in both revenues and margins as the use of services has plummeted; some hospitals, particularly safety-net and rural hospitals, are at risk of closing (Kaufman Hall, 2020; Reese, Lin, and Harhay, 2020). In response, policymakers have distributed emergency funding to hospitals through the Coronavirus Aid, Relief, and Economic Security (CARES) Act (Pub. L.
116-136, 2020). While the options in this report may not currently be on the table, it is likely that policymakers will consider them again once the pandemic subsides and hospital finances stabilize. Indeed, some analysts have speculated that the pandemic could lead to long-term increases in consolidation (Daly, 2020), which could, in turn, lead to additional increases in commercial prices, all of which may create further appetite for policies that would contain hospital spending.

Hospital spending by private health plans contributes significantly to high health care costs in the United States. Regulating commercial prices is a direct way to create significant reductions in spending, but doing so could lead to hospital closures, erode quality, and face daunting political hurdles. Further research could assess geographic variation in price reductions and its impact on hospitals, particularly in underserved areas. Policies that increase price transparency and market competition may encounter fewer obstacles, but their effectiveness in reducing prices is less certain. As policymakers consider options for reducing hospital prices paid by private health plans, they will need to weigh the potential impact of different policies on hospital revenues and quality of care, and they will also need to take into account the political and administrative feasibility of each option.
Appendix A. Technical Specifications

Definition of Prices

Discharge equivalents, revenue, and price (i.e., revenue per discharge equivalent) for Medicare and commercial plans are defined below using variables from the HCRIS.

Medicare Payments per Discharge Equivalent:

\[
mdcr\text{\_discharge\_equivalents} = mdcr\text{\_inpat\_discharges} + (\text{discharge\_equivalents} - \text{all\_inpat\_discharges}) \times (mdcr\text{\_outpat\_charges} / \text{output\_charges\_total}) + mdcr\text{\_adv\_charges\_est} / \text{gross\_patient\_rev} \times \text{discharge\_equivalents}
\]

\[
mdcr\text{\_rev} = mdcr\text{\_inpat\_revs} + mdcr\text{\_outpat\_revs} + mdcr\text{\_adv\_rev\_est}
\]

\[
mdcr\text{\_rev\_perde} = mdcr\text{\_rev} / mdcr\text{\_discharge\_equivalents}
\]

Commercial Payments per Discharge Equivalent:

\[
comm\text{\_discharge\_equivalents} = \text{discharge\_equivalents} \times (\text{gross\_patient\_rev} - (mdcd\text{\_charges} + \text{schip\_charges} + \text{chgs\_charity\_patients\_only10} + \text{stloc\_indigent\_charges})) / \text{gross\_patient\_rev} - mdcr\text{\_discharge\_equivalents}
\]

\[
comm\text{\_rev} = \text{net\_patient\_rev} - (mdcd\text{\_net\_revenue\_only10} + \text{schip\_net\_revenue\_only10} + \text{mdcd\_DSH\_revenue\_only10} + \text{stloc\_indigent\_net\_rev\_only10} + \text{priv\_grants\_for\_charity\_only10} + \text{govt\_grants\_for\_uncomp\_only10} + \text{pymt\_insured\_charity\_only10} + \text{mdcr\_inpat\_revs} + \text{mdcr\_outpat\_revs} + \text{mdcr\_adv\_rev\_est})
\]

\[
comm\text{\_rev\_perde} = comm\text{\_rev} / comm\text{\_discharge\_equivalents}
\]

Quantity Changes

Table A.1 shows the parameters used to estimate changes in quantity in response to price changes. In this analysis, quantity is measured as discharge equivalents.
We estimated the change in hospital quantity following a price change as follows:

\[
\% \text{ change in patients' desired hospital quantity} = \% \text{ change in hospital price} \times OOP \text{ share} \times e_{dp} \tag{1}
\]

\[
\% \text{ change in hospitals' desired quantity} = \% \text{ change in hospital price} \times e_{sp} \tag{2}
\]

\[
\% \text{ change in hospital quantity} = \frac{e_{sc}}{e_{sc} - e_{dc}} \times \% \text{ change in patients' desired hospital quantity} + \frac{-e_{dc}}{e_{sc} - e_{dc}} \times \% \text{ change in hospitals' desired quantity} \tag{3}
\]

For example, if the percentage change in hospital price were \(-10\) percent for all commercial plans, then the estimated percentage change in hospital volume would be \(-2.9\) percent:

\[
\% \text{ change in patients' desired hospital quantity} = -0.10 \times 0.077 \times -0.2 = 0.0015
\]

\[
\% \text{ change in hospitals' desired quantity} = -0.10 \times 0.6 = -0.06
\]

\[
\% \text{ change in hospital quantity} = 0.5 \times 0.0015 + 0.5 \times -0.06 = -0.029.
\]

**Hospital Market Concentration and Prices**

We estimated the change in prices following a hypothetical increase in the competitiveness of hospital markets by multiplying the percentage increase in HHI at the HRR level by estimates of the elasticity of prices with respect to HHI. We derived estimates of the elasticity of prices with respect to HHI—with low, medium, and high estimates of 0.05, 0.10, and 0.36—from a recent, widely cited paper (Cooper et al., 2019). In one analysis, the authors regressed log price against log hospital-specific HHI with HRR fixed effects, hospital and county controls, and
controls for the market share of in-sample insurers. That analysis yielded elasticity estimates ranging from about 0.05 to 0.10 depending on the market radius used to define HHI. In another analysis, the authors regressed log price against a dummy indicating whether a hospital was involved in a merger in a given year, with hospital fixed effects. They found that a merger between hospitals within 15 miles of each other resulted in a 6.8 percent increase in prices after two or more years. In a separate section of the study, the authors reported that the hospital-specific HHI increased by 19 percent in such scenarios. We took the ratio to generate an elasticity estimate of 0.36.

Table A.2 summarizes this paper and several other studies over the past 20 years that relate hospital prices with measures of hospital market concentration or with hospital mergers. Most studies have found that increases in market concentration are associated with increases in prices, as one would expect, though Table A.2 also highlights the substantial level of uncertainty regarding the magnitude of this relationship. First, several studies do not provide enough information to generate elasticity estimates (e.g., studies that estimate the effect of mergers on prices without quantifying the change in market concentration associated with those mergers). Second, in instances where we were able to derive elasticity estimates, the magnitude varied substantially, ranging from 0.04 to 1.02. This may reflect the fact that there are significant empirical challenges when estimating the relationship between market concentration and prices, as well as the fact that elasticities may vary based on the starting HHI level. For example, a 1-percent increase in HHI from a starting HHI of 5,000 could result in a higher price increase than a 1-percent increase in HHI from a starting HHI of 1,000 because the latter market is still considered competitive. A limitation of our analysis is that we did not account for such variation when we extrapolated local elasticity estimates from Cooper et al. (2019) to model the effect of large changes in market concentration. Third, while much of the literature evaluates the effect of mergers on prices among involved hospitals, research generally does not identify the implications for other hospitals in the same market (though one study focused specifically on rival hospitals and found large price effects; see Dafny, 2009). Finally, there are important methodological limitations of many of the studies in the literature (Gaynor, Ho, and Town; 2015). For example, some studies may conflate the effect of mergers on price with the effect of other underlying market trends that lead to mergers (Gaynor, Ho, and Town, 2015).
<table>
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<td>2009–2016</td>
<td>Hospital-specific</td>
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<td>Moving from a competitive market (HHI &lt; 1,500) to a moderately concentrated market (HHI 1,500–2,500) was associated with a 0.01 increase in the price index, as was moving from a competitive to a concentrated market (HHI 2,500+)</td>
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<tr>
<td></td>
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<td></td>
<td>Regressed log price against log HHI categories with MSA and year fixed effects</td>
<td>Elasticity of prices with respect to HHI of 0.06</td>
<td>—</td>
<td>—</td>
<td>0.06a</td>
</tr>
<tr>
<td>Capps and Dranove (2004)</td>
<td>1998–2000</td>
<td>System-specific minus hospital-specific</td>
<td>Regressed log price change against change in HHI; hospital controls</td>
<td>The authors predicted that a 1,000-point increase in the HHI would lead to a 0.5%–7.9% change in prices depending on the region (statistical significance not reported).</td>
<td>—</td>
<td>0.5 to 7.9</td>
<td>—</td>
</tr>
<tr>
<td>Cooper et al. (2019)</td>
<td>2007–2011</td>
<td>Hospital-specific</td>
<td>Regressed log price against log HHI with HRR fixed effects, controls for market share of in-sample insurers and includes hospital and county controls; regressed log price against log HHI against the number of hospitals with HRR fixed effects; controls for market share of in-sample insurers and includes hospital and county controls</td>
<td>Elasticity of prices with respect to HHI of 0.05 to 0.10</td>
<td>—</td>
<td>—</td>
<td>0.05 to 0.10</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Monopoly prices were 12.5% higher than prices in areas with 4+ hospitals.</td>
<td>—</td>
<td>12.5</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Dauda (2018)</td>
<td>2005–2008</td>
<td>Hospital-specific, averaged across counties</td>
<td>Regressed log price against hospital and insurer market contraction with condition and state-year fixed effects; patient, hospital, and county controls; instrumented for HHI using the interaction of CON law stringency with market size proxies</td>
<td>A 10% increase in HHI leads to a 1.4%–5% increase in prices (depending on the travel radius). Two hospitals merging in a market with five equally sized hospitals would lead to a 4.9%–18.4% increase in prices.</td>
<td>10.0</td>
<td>1.4 to 5</td>
<td>0.14 to 0.50</td>
</tr>
<tr>
<td>Dranove et al. (2008)</td>
<td>1990–2003</td>
<td>Hospital-specific HHI</td>
<td>Instrumented for HHI using distance between patients and hospitals; hospital fixed effects with controls for ZIP Code demographics</td>
<td>The coefficient on HHI was negative in 1990 but increased to 0.234 in 2003.</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Years</td>
<td>HHI Definition</td>
<td>Methodology</td>
<td>Results</td>
<td>Change in HHI (%)</td>
<td>Change in price (%)</td>
<td>Change in Price (%) / Change in HHI (%)</td>
</tr>
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<td>-------------------------</td>
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</tr>
<tr>
<td>Melnick, Shen, and Wu</td>
<td>2001, 2004</td>
<td>Hospital-specific</td>
<td>Regressed hospital prices against hospital HHI, health plan HHI, and various controls</td>
<td>A 1,000-point increase in hospital concentration is associated with an 8.3% increase in hospital prices.</td>
<td>—</td>
<td>8.3</td>
<td>—</td>
</tr>
<tr>
<td>Moriya, Vogt, and Gaynor</td>
<td>2001–2003</td>
<td>HSA level</td>
<td>Regressed log price against hospital HHI and insurer HHI with hospital and year fixed effects; patient and hospital controls</td>
<td>A hypothetical merger between two of five equally sized hospitals (a change in HHI from 2,000 to 2,800) is estimated to increase hospital prices by 1.5% (95% confidence interval: –2.2% to 4.4%)</td>
<td>40.0</td>
<td>1.5</td>
<td>0.04</td>
</tr>
<tr>
<td>Cooper et al.</td>
<td>2007–2011</td>
<td>Hospital-specific</td>
<td>Regressed log price against a dummy indicating whether a hospital was involved in a merger in a given year, with hospital fixed effects; stratified by distance between merging hospitals</td>
<td>Mergers led to a 19% average increase in HHI and a 6% increase in prices among merging hospitals when hospitals were within 5 miles of each other (generally smaller increases when hospitals were further apart). Rival mergers lead to a 46% increase in hospital price.</td>
<td>19.0</td>
<td>6.8</td>
<td>0.36</td>
</tr>
<tr>
<td>Dafny (2009)</td>
<td>1988–1997</td>
<td>—</td>
<td>Examined the relationship between a hospital’s prices and whether rivals merged; instrumented for the latter using whether two rival hospitals were near each other; hospital and market controls</td>
<td>Cross-market, within-state mergers yield price increases of 7%–9% for acquiring hospitals. Results for out-of-state acquisitions were small and not statistically significant.</td>
<td>—</td>
<td>46.0</td>
<td>—</td>
</tr>
<tr>
<td>Dafny, Ho, and Lee</td>
<td>1996–2012</td>
<td>—</td>
<td>Focused on bystander hospitals in hospital system mergers (i.e., hospitals that are not in the same market, presuming that same-market hospitals are driving mergers); event-study model in which the treatment (a merger) varies based on whether the merger was in-state; hospital controls</td>
<td>Cross-market, within-state mergers yield price increases of 7%–9% for acquiring hospitals. Results for out-of-state acquisitions were small and not statistically significant.</td>
<td>—</td>
<td>7 to 9</td>
<td>—</td>
</tr>
<tr>
<td>Gowrisankaran, Nevo, and Town</td>
<td>2003–2006</td>
<td>Unclear</td>
<td>Estimated a structural model of competition in which prices are negotiated between managed care organizations and hospitals; simulated the effect of a proposed (but abandoned) acquisition by InovaHealth System of Prince William Hospital</td>
<td>The FTC estimated that the acquisition would have increased the HHI from 5,636 to 6,174. The authors estimate that it would have led to a 3.1%–7.2% increase in average prices.</td>
<td>9.5⁶</td>
<td>3.1 to 7.2</td>
<td>0.32 to 0.75</td>
</tr>
</tbody>
</table>

⁶ The study involved a structural model of competition in which prices were negotiated between managed care organizations and hospitals; it simulated the effect of a proposed (but abandoned) acquisition by InovaHealth System of Prince William Hospital.
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Years</th>
<th>HHI Definition</th>
<th>Methodology</th>
<th>Results</th>
<th>Change in HHI (%)</th>
<th>Change in price (%)</th>
<th>Change in Price (%) / Change in HHI (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haas-Wilson and Garmon (2011)</td>
<td>1998–2002</td>
<td>Unclear</td>
<td>DID model evaluating Evanston Northwestern/Highland Park merger and St. Therese/Victory Memorial mergers in Chicago primary MSA; hospital and year fixed effects with patient, (time-varying) hospital, and insurer controls</td>
<td>Evanston merger was associated with 15.1% increase in prices relative to nonmerging hospitals in the region. Price changes at five large insurers ranged from a 3.8% to a 64.9% increase. St. Therese merger was associated with a 6.6% decrease relative to nonmerging hospitals in the region. Price changes ranged from a 19.7% decrease to a 10.7% increase at five large insurers.</td>
<td>16.3</td>
<td>14.2 to 16.6</td>
<td>0.87 to 1.02</td>
</tr>
<tr>
<td>Krishnan (2001)</td>
<td>1994–1995</td>
<td>Hospital-, DRS-specific</td>
<td>DID model comparing either across hospitals (merging and nonmerging) or within hospitals (DRGs whose market share did and did not substantially increase)</td>
<td>Mergers with large changes in market shares were associated with a 9.7%–10.0% increase in price/patient day. Mergers that resulted in an HHI increase of 2,000+ were associated with an 11.2% increase in price/patient day.</td>
<td>—</td>
<td>9.7 to 10.0</td>
<td>—</td>
</tr>
<tr>
<td>Lewis and Pflum (2017)</td>
<td>1998–2010</td>
<td>Hospital-specific</td>
<td>Fixed-effects model identifying changes in log price after a given hospital joins an out-of-market system or after a hospital joins a system with some hospitals in the same market; hospital and county controls</td>
<td>The average acquisition in sample led to an HHI increase of 0.0055. A hospital’s acquisition by an out-of-market system led to a 17% increase in prices. The prices of nearby competitors to acquired hospitals increased by around 8%.</td>
<td>—</td>
<td>17.0</td>
<td>—</td>
</tr>
<tr>
<td>Melnick and Fonkych (2016)</td>
<td>2004–2013</td>
<td>—</td>
<td>Regressed price against time dummies and time dummies interacted with membership in the two largest systems; hospital and market controls</td>
<td>There were larger increases in prices among members of the two large systems than among other hospitals. By the end, prices at hospitals in the largest systems exceeded prices at other hospitals by almost $4,000 per admission (25%).</td>
<td>—</td>
<td>25</td>
<td>—</td>
</tr>
<tr>
<td>Melnick and Keeler (2007)</td>
<td>1999–2003</td>
<td>Hospital-specific</td>
<td>Regressed price against system membership with year dummies and year dummies interacted with system membership</td>
<td>There were larger increases in prices among members of systems than among nonsystem hospitals. In 2003, prices were 34% higher among members of large systems and 17% higher among members of small systems than among nonsystem hospitals. The merger increased prices at Summit 23.2%–50.4%, depending on the insurer. The effect of the merger on prices was not statistically significant at Alta Bates.</td>
<td>—</td>
<td>17 to 34</td>
<td>—</td>
</tr>
<tr>
<td>Tenn (2008)</td>
<td>1999–2011</td>
<td>—</td>
<td>DID model comparing changes in prices among Summit and Alta Bates following their merger to changes among other hospitals; hospital controls</td>
<td>—</td>
<td>—</td>
<td>23.2 to 50.4</td>
<td>—</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Years</td>
<td>HHI Definition</td>
<td>Methodology</td>
<td>Results</td>
<td>Change in HHI (%)</td>
<td>Change in price (%)</td>
<td>Change in Price (%) / Change in HHI (%)</td>
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</tr>
<tr>
<td>Thompson (2009)</td>
<td>1997–2002</td>
<td>—</td>
<td>DID model comparing changes in prices among merging hospitals with changes at other hospitals; patient and insurer controls</td>
<td>The merger led to an increase in prices of 56.5% and 65.3% among two insurers and a decrease of 30% for one insurer. Results for the fourth insurer were not statistically significant.</td>
<td>—</td>
<td>—30 to 65.3</td>
<td>—</td>
</tr>
<tr>
<td>Vita and Sacher (2001)</td>
<td>1986–1996</td>
<td>Unclear</td>
<td>DID model comparing changes in prices at Dominican (which acquired the only other hospital in Santa Cruz) and Watsonville Community Hospital (Dominican's only remaining competitor in the county) with changes in prices among matched hospitals in other counties</td>
<td>The FTC estimated that the merger increased the HHI from about 3,770 to 6,090 points. The merger was associated with a $1,005 increase per admission at Dominican and a $672 increase per admission at Watsonville (its competitor).</td>
<td>61.5&lt;sup&gt;a&lt;/sup&gt;</td>
<td>22.7&lt;sup&gt;f&lt;/sup&gt;</td>
<td>0.37</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>61.5&lt;sup&gt;a&lt;/sup&gt;</td>
<td>12.7&lt;sup&gt;f&lt;/sup&gt;</td>
<td>0.21</td>
</tr>
</tbody>
</table>

**NOTES:** DID = difference in differences; DRG = diagnosis-related group. This table includes studies relating price with measures of hospital market concentration and with mergers, regardless of whether they reported estimates as levels or percentages. We translated estimates of levels into percentages if the authors provided enough information to do so.

<sup>a</sup> One of the authors shared this unpublished estimate by email.

<sup>b</sup> The authors note that the FTC estimated that this merger would have increased the HHI from 5,636 to 6,174.

<sup>c</sup> The authors note that the administrative law judge overseeing this merger estimated that it would lead to an increase in HHI from 2,355 to 2,739.

<sup>d</sup> Range reflects estimates across different insurers.

<sup>o</sup> The authors note that the FTC estimated that this merger increased the HHI from about 3,770 to 6,090 points.

<sup>f</sup> DID estimate divided by the sample mean.
Table B.1 shows the estimated impact of the policy scenarios on hospital prices, spending, and spending relative to hospital spending by private plans, hospital spending, private health plan spending, and national health spending. The spending totals are from the National Health Expenditure Accounts (CMS, 2020a).

<table>
<thead>
<tr>
<th>Policy Scenario</th>
<th>Change in Average Hospital Price Paid by Private Plans (%)</th>
<th>Change in Hospital Spending ($ Billions)</th>
<th>Change in Hospital Spending by Private Plans (%)</th>
<th>Change in Hospital Spending (% in Hospital Spending)</th>
<th>Change in Private Health Plan Spending (%)</th>
<th>Change in National Health Spending (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate setting in all private plans</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>100</td>
<td>-41.7</td>
<td>-236.6</td>
<td>-56.6</td>
<td>-19.9</td>
<td>-19.0</td>
<td>-6.5</td>
</tr>
<tr>
<td>125</td>
<td>-27.2</td>
<td>-152.8</td>
<td>-36.5</td>
<td>-12.8</td>
<td>-12.3</td>
<td>-4.2</td>
</tr>
<tr>
<td>150</td>
<td>-12.6</td>
<td>-61.9</td>
<td>-14.8</td>
<td>-5.0</td>
<td>-5.0</td>
<td>-1.7</td>
</tr>
<tr>
<td>175</td>
<td>+1.9</td>
<td>+36.1</td>
<td>+8.6</td>
<td>+2.9</td>
<td>+2.9</td>
<td>+1.0</td>
</tr>
<tr>
<td>Rate setting in a public option</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>-4.5</td>
<td>-23.0</td>
<td>-5.5</td>
<td>-1.9</td>
<td>-1.9</td>
<td>-0.6</td>
</tr>
<tr>
<td>125</td>
<td>-2.9</td>
<td>-13.2</td>
<td>-3.2</td>
<td>-1.1</td>
<td>-1.1</td>
<td>-0.4</td>
</tr>
<tr>
<td>150</td>
<td>-1.4</td>
<td>-4.7</td>
<td>-1.1</td>
<td>-0.4</td>
<td>-0.4</td>
<td>-0.1</td>
</tr>
<tr>
<td>175</td>
<td>+0.2</td>
<td>+2.3</td>
<td>+0.6</td>
<td>+0.2</td>
<td>+0.2</td>
<td>+0.1</td>
</tr>
<tr>
<td>Rate setting for dominant hospitals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>-4.8</td>
<td>-25.4</td>
<td>-6.1</td>
<td>-2.1</td>
<td>-2.0</td>
<td>-0.7</td>
</tr>
<tr>
<td>125</td>
<td>-3.4</td>
<td>-17.9</td>
<td>-4.3</td>
<td>-1.5</td>
<td>-1.4</td>
<td>-0.5</td>
</tr>
<tr>
<td>150</td>
<td>-2.0</td>
<td>-9.7</td>
<td>-2.3</td>
<td>-0.8</td>
<td>-0.8</td>
<td>-0.3</td>
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<tr>
<td>175</td>
<td>-0.6</td>
<td>-1.0</td>
<td>-0.2</td>
<td>-0.1</td>
<td>-0.1</td>
<td>-0.0</td>
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<tr>
<td>Capped rates in all private plans</td>
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<tr>
<td>100</td>
<td>-43.2</td>
<td>-246.4</td>
<td>-58.9</td>
<td>-20.7</td>
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<td>-6.8</td>
</tr>
<tr>
<td>125</td>
<td>-30.8</td>
<td>-178.5</td>
<td>-42.7</td>
<td>-15.0</td>
<td>-14.4</td>
<td>-4.9</td>
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<tr>
<td>150</td>
<td>-20.5</td>
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<td>-3.3</td>
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<td>-12.7</td>
<td>-72.8</td>
<td>-17.4</td>
<td>-6.1</td>
<td>-5.9</td>
<td>-2.0</td>
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<tr>
<td>200</td>
<td>-7.6</td>
<td>-42.7</td>
<td>-10.2</td>
<td>-3.6</td>
<td>-3.4</td>
<td>-1.2</td>
</tr>
<tr>
<td>Policy Scenario</td>
<td>Change in Average Hospital Price Paid by Private Plans (%)</td>
<td>Change in Hospital Spending ($ Billions)</td>
<td>Change in Hospital Spending by Private Plans (%)</td>
<td>Change in Hospital Spending (%)</td>
<td>Change in Private Health Plan Spending (%)</td>
<td>Change in National Health Spending (%)</td>
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<tr>
<td><strong>Price transparency</strong></td>
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<tr>
<td>Patient-driven response with</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34% shoppable services</td>
<td>−1.7</td>
<td>−8.7</td>
<td>−2.1</td>
<td>−0.7</td>
<td>−0.7</td>
<td>−0.2</td>
</tr>
<tr>
<td>43% shoppable services</td>
<td>−1.4</td>
<td>−11.1</td>
<td>−2.6</td>
<td>−0.9</td>
<td>−0.9</td>
<td>−0.3</td>
</tr>
<tr>
<td>Employer-driven response toward</td>
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<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>75th-percentile price</td>
<td>−2.2</td>
<td>−13.2</td>
<td>−3.2</td>
<td>−1.1</td>
<td>−1.1</td>
<td>−0.4</td>
</tr>
<tr>
<td>median price</td>
<td>−4.7</td>
<td>−26.6</td>
<td>−6.4</td>
<td>−2.2</td>
<td>−2.1</td>
<td>−0.7</td>
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<tr>
<td>Increased hospital competition</td>
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<tr>
<td>HHI decrease of up to 1,000 points</td>
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</tr>
<tr>
<td>small price response</td>
<td>−1.0</td>
<td>−6.2</td>
<td>−1.5</td>
<td>−0.5</td>
<td>−0.5</td>
<td>−0.2</td>
</tr>
<tr>
<td>medium price response</td>
<td>−1.9</td>
<td>−12.4</td>
<td>−3.0</td>
<td>−1.0</td>
<td>−1.0</td>
<td>−0.3</td>
</tr>
<tr>
<td>large price response</td>
<td>−7.0</td>
<td>−43.8</td>
<td>−10.5</td>
<td>−3.7</td>
<td>−3.5</td>
<td>−1.2</td>
</tr>
<tr>
<td>HHI decrease to 1,500 points</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>small price response</td>
<td>−1.6</td>
<td>−9.9</td>
<td>−2.4</td>
<td>−0.8</td>
<td>−0.8</td>
<td>−0.3</td>
</tr>
<tr>
<td>medium price response</td>
<td>−3.1</td>
<td>−19.7</td>
<td>−4.7</td>
<td>−1.7</td>
<td>−1.6</td>
<td>−0.5</td>
</tr>
<tr>
<td>large price response</td>
<td>−11.2</td>
<td>−68.9</td>
<td>−16.5</td>
<td>−5.8</td>
<td>−5.5</td>
<td>−1.9</td>
</tr>
</tbody>
</table>

**NOTE:** The estimated changes in average hospital prices and spending are for 4,034 nonfederal, short-stay hospitals reporting data to HCRIS in 2018. The percentage changes in spending are relative to hospital, private health insurance, and national health expenditures in the National Health Expenditure Accounts (CMS, 2020a). Private health insurance includes fully insured and self-insured plans and does not include Medicare Advantage and Medicaid managed care plans. The HHI is a measure of market concentration; the DOJ and FTC define an HHI below 1,500 as *unconcentrated*, between 1,500 and 2,500 as *moderately concentrated*, and above 2,500 as *highly concentrated*. Under the first competition policy scenario, the HHI would decrease (1) to 1,500 in moderately concentrated markets (i.e., by up to 1,000 points) and (2) by 1,000 points in highly concentrated markets. A 1,000-point decrease reflects the difference between the upper bound for an unconcentrated market (1,500) and the upper bound for a moderately concentrated market (2,500). Under the second competition policy scenario, the HHI would decrease to 1,500 in all regions above that threshold (e.g., with decreases greater than 1,000 points in highly concentrated regions).
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AHA—See American Hospital Association.

AHRQ—See Agency for Healthcare Research and Quality.


APCD—See All-Payer Claims Database.


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