

# Addressing Healthcare Consolidation in the U.S.

Potential Policy Options for a Competitive  
and Transparent Future

**Policy Brief**

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# Summary of the Issue

Healthcare consolidation in the U.S. has significantly increased over the past few decades, leading to a highly concentrated market dominated by a few large health systems and insurers.<sup>1,2</sup> This consolidation has contributed to rising healthcare costs,<sup>1,3</sup> with the U.S. spending twice more per capita on healthcare than any other high-income nation.<sup>4</sup> The trend is driven by hospital and physician group mergers<sup>2</sup> and more recently, the growing influence of private equity (PE) firms, which have accelerated the consolidation of various healthcare sectors.<sup>3,5</sup> Research has shown that this consolidation increases prices and, contrary to efficiency claims, reduces the quality of care and access to services.<sup>3,5,6,7</sup>

## Overview of Policy Options

1. Increased scrutiny of transactions that fall below current reporting thresholds
2. Enhance ownership transparency
3. Expand Site-Neutral Payment Policies
4. Close exploited payment loopholes, particularly in Medicare
5. Ban anticompetitive payer-provider contracting terms
6. Mandate disclosures of intercompany transfers to prevent MLR gaming
7. Consider a "Glass-Steagall" Act for healthcare
8. Strengthen laws to protect clinical autonomy
9. Increase enforcement of fraud and abuse laws
10. Strengthen the No Surprises Act

# Overview: Types of Consolidation

## Horizontal Consolidation

Horizontal consolidation involves the merger or acquisition of similar entities within the same geographic region. Since this type of consolidation generally occurs within the same market sector, it involves consolidation among direct competitors. In healthcare, horizontal consolidation typically involves the merger of hospitals or insurers within the same geographic area, leading to larger entities that dominate local markets:

- **Hospital Mergers:** Starting in the late 1990s, hospitals in the U.S. started merging, which eventually resulted in the formation of large, multi-state health systems. Over 90% of US hospital markets are considered to be highly concentrated.<sup>1</sup> Concurrently, the majority of the hospital services are currently offered by hospitals that are part of large health systems, as opposed to being delivered by independent hospitals.<sup>8</sup>
- **Insurer Horizontal Consolidation:** The 1990s and early 2000s saw extensive consolidation among insurers and by 2022, nearly 75% of commercial markets were highly concentrated (HHI>1800). This horizontal consolidation has given insurers significant bargaining power over health systems,<sup>9,10</sup> leading to higher premiums for consumers and lower prices paid to providers.<sup>11</sup>

## Vertical Consolidation

Vertical consolidation involves the integration of entities that differ in the types of services or products offered and, hence, do not directly compete with each other. In the healthcare context, vertical consolidation might involve a hospital system acquiring physician practices or insurance companies as expanded on below:

- **Hospital-Physician Integration:** In recent years, consolidation has extended beyond hospitals to include physician practices facilitated by both health systems and other corporate entities such as insurers and PE firms. This wave of vertical integration has resulted in more than 55% of U.S. physicians becoming hospital-employed, with another 23% working for other corporate owners.<sup>10</sup>
- **Insurer-Led Vertical Integration:** In addition to horizontal consolidation, insurer-provider integration represents a growing form of vertical healthcare consolidation. Many leading insurance players like UnitedHealthcare, Cigna, and Humana have now sought to vertically consolidate with healthcare entities, while companies like Kaiser and Geisinger have long exemplified integrated models. While this form of integration may improve care coordination, it may also reduce competition and lead to higher prices for consumers, with its effects yet to be studied.

- **Pharmacy Benefit Managers (PBMs):** The market for PBMs –the intermediaries that manage pharmacy benefits between insurers, manufacturers, wholesalers, and pharmacies–is highly consolidated. According to an analysis<sup>12</sup> by the Federal Trade Commission (FTC), the top three PBMs; CVS Caremark, Express Scripts, and OptumRx, processed nearly 80% of the approximately 6.6 billion prescriptions dispensed by U.S. pharmacies in 2023. These three PBMs are all merged with both large insurers and pharmacies (Aetna, Cigna, and UnitedHealth, respectively), creating vertically integrated entities that control a substantial portion of the prescription drug market, pricing, and distribution. There is currently a lack of transparency into prices and rebates, which makes it difficult to fully understand how PBMs might be utilizing the prescription drug market to increase profits and drive up costs for consumers.

## Cross-Market Consolidation

Cross-market consolidation involves the integration of entities that span different geographic markets and/or product or service markets. These entities do not directly compete with each other as in the case of vertical consolidation. Cross-market consolidation often results in forming large, multi-state or national health systems that control a significant portion of the market across various regions. For example, a hospital system in one state might merge with a system in another state, creating a multi-state healthcare provider, such as the Atrium-Advocate merger across 6 states or Ascension's 19-state hospital system.

## The Emerging Case of Private Equity

PE investment in healthcare has surged dramatically over the past two decades, with a notable acceleration in recent years. From 2000 to 2018, PE capital investment in the healthcare industry grew by 2000%, skyrocketing from \$5 billion to \$100 billion, leading to an estimated \$1 trillion spent in PE investment activity in healthcare over the past decade. PE firms pursue both cross-market strategies, acquiring entities in different regions or specialties, and horizontal consolidation within specific geographic markets, such as US Anesthesia Partners (USAP), which is alleged to have engaged in anticompetitive behavior through horizontal consolidation within the Texas anesthesia markets, particularly in Houston and Dallas.<sup>13</sup> While PE's investment initially focused on hospitals and nursing facilities, it has recently expanded to physician practices, ambulatory surgery centers, hospices, telehealth services, and behavioral healthcare providers, including opioid treatment programs.<sup>14,15</sup> PE firms strategically tailor their revenue strategies to specific specialties that offer exploitable revenue opportunities. Over the past decade, PE has aggressively entered the physician market, focusing on three primary categories: hospital-based physicians (e.g., emergency, anesthesiology, radiology), office-based specialties (e.g., dermatology, ophthalmology, gastroenterology), and primary care, cardiology, and behavioral health.

# Factors Driving Healthcare Consolidation

## Higher Bargaining Power

One of the primary drivers of healthcare consolidation of providers is the desire to increase bargaining power with payers such as insurance companies. Health systems acquire physician groups and other healthcare providers to create larger integrated networks and negotiate higher reimbursement rates from insurers. Moreover, with physician practices, market dominance allows health systems to direct patient referrals within its network, and steer patient volume to higher-priced system facilities.<sup>16</sup> This mechanism is especially true with physicians who choose to vertically integrate as they have little negotiating power if they stay independent.

## Growth Opportunities in Fragmented Markets

PE's entry into healthcare is facilitated in markets that present opportunities for "platform and add-on consolidation" where PE firms acquire a "platform" company in a specific healthcare sector—such as a large physician practice or a specialty clinic—and then strategically acquire smaller "add-on" practices or entities to expand the platform's reach and market share. Moreover, many healthcare sectors, like physician markets, are highly fragmented, consisting of numerous small, independently operated practices and providers. This presents a prime opportunity for PE firms (and other healthcare investors) to consolidate physician specialties and streamline operations to form larger healthcare entities with greater market share, economies of scale, and negotiating power.<sup>17</sup>

## Financial, Regulatory, and Tax Advantages

Despite high interest rate environments, PE firms continue to make majority-stake investments in healthcare practices.<sup>18</sup> Moreover, existing tax policies, particularly the preferential treatment of carried interest (i.e., the share of profits earned by PE firms, which is usually 20%) that is taxed at lower capital gains rather than higher ordinary income rates.<sup>19</sup> This provides significant tax advantages to PE firms which pay significantly less on their investment as compared to other income sources.<sup>20</sup> Additionally, fee-for-service systems that reward volume over value, can align with PE firm's focus on maximizing profits, and may encourage overuse and wasteful healthcare spending.

## Shift to Capitation-based Financing

In the case of insurer-led integration, insurance companies are increasingly integrating with healthcare providers to capitalize on the shift from fee-for-service to capitation-based financing in public programs. With Medicare Advantage enrollment surpassing 50% and generating substantial profits, insurers are set to receive around \$500 billion in 2024 for administering these plans. Combined with another \$500 billion from privatized state Medicaid programs, this capital

drives acquisitions of physician practices and care-delivery companies. By buying physician practices and care-delivery companies, insurers aim to maximize capitated payments and reduce costs through efficient management and intercompany transfers. This strategic move not only enhances their role in value-based payment models but also taps into substantial government funds, estimated at \$150 billion annually.<sup>21</sup>

## Impact of Healthcare Consolidation

### Healthcare consolidation aggressively drives up prices across various care settings.

From 2012 to 2022, hospital mergers contributed to nearly \$1 trillion in reduced wages for U.S. workers due to increased healthcare costs passed on to consumers.<sup>22</sup> Cross-market mergers, where health systems merge across different geographic areas, have further driven up hospital prices.<sup>23,24,25</sup>

Hospitals that integrated with physician practices experienced a 3–5% price increase, attributed to greater bargaining power<sup>26</sup> and more intensive coding practices.<sup>27</sup> By aligning physician practices with hospital systems, these entities manipulate referral patterns, directing patients to more expensive in-system providers for follow-up care and ancillary services.<sup>28,29,30,31,32</sup> This strategy exploits the "site of service differential," where outpatient services are reimbursed at higher rates in hospital settings compared to non-hospital settings, further inflating healthcare costs.<sup>33,34,35,36</sup>

Similarly, PE-driven consolidation enables hospitals to use their increased bargaining power with insurers to raise prices. This dynamic has shown to lead to an 11% increase in bargained prices between PE-owned hospitals and insurers. Moreover, this price increase does not just affect the acquired hospital but also surrounding local hospitals.<sup>37</sup>

In the case of PE-acquired physician practices, research has shown that these practices have an increased volume of patient encounters and prices<sup>38,39</sup> for healthcare services by varying proportions according to the specialty as well as market concentration.<sup>40</sup> For example, PE firms increased prices by 11% across dermatology, gastroenterology, and ophthalmology,<sup>39</sup> and by a substantial amount of 70% in neonatology.<sup>40,41</sup> This increase in price also includes changes in prescribing patterns, where PE associated practices prescribe higher priced drugs leading to higher Medicare spending.<sup>42</sup>

For PBMs, vertical consolidation with major health insurers and pharmacies have enabled them to exert significant control over drug pricing and access. This has affected consumers who in turn face higher prices and limited choices for their medications. PBMs increase drug prices primarily through practices like rebate retention, where they negotiate rebates from drug manufacturers in exchange for placing their drugs favorably on formularies and retain a portion of the profit, thus incentivizing them to prefer higher-priced drugs with larger rebates. Another way PBM driven

consolidation increases pricing is through spread pricing, where they charge health plans more for a drug than they reimburse pharmacies, keeping the difference as profit. This not only inflates costs for health plans and employers but also often results in lower reimbursements for pharmacies, contributing to higher overall drug costs and increased out-of-pocket expenses for patients.<sup>43</sup>

Lastly, in the case of insurer-provider consolidation, there is currently limited research on its effects on prices. However, given that insurers can cut reimbursements to pressure independent practices and PBMs to sell (and thus steer patients to their services) and the trend of vertical consolidation, it is foreseeable that such consolidation could impact prices and market competition.<sup>44,45</sup>

## **Acquired healthcare entities are saddled with a heavy debt burden**

PE acquisitions do not just raise prices for consumers but also leave acquired healthcare entities with a heavy debt burden.<sup>5</sup> In the hospital and nursing home setting, PE firms sell the acquired entity's real estate/building to a real estate investment trust (REIT), which is then leased back to the healthcare entity.<sup>46</sup> This generates transaction fees which goes to the PE firm and the associated lease which goes to the REIT, thus leaving the healthcare entity with continuing payments, and a debt burden in the long run. This financial strain may lead to reduced investments in patient care, workforce reductions, or even bankruptcy as most recently evidenced in 2024 for Steward Health Care in Massachusetts.<sup>47</sup>

## **Research on mergers and acquisitions have shown mixed effects on its impact on quality.**

Some studies have shown a decline in patient experience post-acquisition with outcomes related to readmission or mortality rates remaining unchanged<sup>48,49</sup> or worsening<sup>49,50</sup>, with notable differences in mergers done in urban vs. rural settings.<sup>51</sup> These variable findings raise questions about the overall benefits of hospital consolidation in improving care quality despite its associated increase in healthcare prices. Moreover for hospitals integrated with physician practices, research has shown no improvements in hospital quality indicators like mortality and readmission rates or changes in patient demographics, suggesting that the higher prices were not due to enhanced care or different patient mixes.<sup>26,52</sup> Moreover, integrated practices saw a reduction in patient volume, billed Medicare claims, and professional physician fee. However these losses were nearly offset by increased outpatient facility fees, implying that integration may limit patient access to primary care for Medicare patients without significantly impacting overall Medicare revenue for hospitals.<sup>27</sup>

Similarly, focused on quick returns, PE firms may cut costs by changing staffing in ways that can affect patient care. Research shows that hospital-acquired adverse events increased by 25% following PE acquisition, including a 38% rise in central-line bloodstream infections despite fewer central lines being used.<sup>6</sup> Additionally, PE-acquired hospitals saw increases in falls and surgical

site infections, indicating a broader decline in patient safety. Similarly, patients in PE-acquired nursing homes experienced an 11% increase in mortality and declines in well-being, such as decreased mobility and more pressure ulcers and pain.<sup>7</sup> However, some studies show that the effects of PE ownership on healthcare quality are not universally negative. For instance, research by Cerullo et al.,<sup>53</sup> found that PE-acquired short term acute care hospitals experienced improved in-hospital mortality and 30 day mortality rates for patients with acute myocardial infarction, as compared to non-PE-acquired hospitals. However, the same study found no significant improvements in other dimensions of care, such as 30-day readmissions, length of stay, or 30-day episode payments. Moreover, there was no reduction in mortality for other common acute conditions like stroke or pneumonia. Another study<sup>54</sup> analyzed PE acquisitions in the fertility sector, particularly in in-vitro fertilization (IVF) clinics, and found that the number of IVF cycles and transfers (measured as clinic volume) and IVF success rates improved post-acquisition. These findings highlight the varied impact of private equity across different sectors of healthcare, types of medical conditions, and patient outcomes studied, and is a space for continued research.

## Healthcare consolidation can affect clinical workforce composition and compensation.

Research has found that when hospital mergers significantly increased the number of hospitals under one employer, wage growth for workers slowed down. In particular, wages for skilled non-health professionals were 4% lower, and wages for nursing and pharmacy workers were 6.8% lower than they would have been without the merger. This equated to an annual wage growth slowed by about 1% for skilled non-health professionals and 1.7% for nursing and pharmacy workers due to hospital consolidation.<sup>55</sup> Another study looking at the impact of hospital mergers on wages, found that higher healthcare costs translated into a 2.3% reduction in hourly wages for workers with employer-sponsored health insurance. Over the 2012–2022 period, this translated to nearly \$838 billion in reduced wages for U.S. workers.<sup>22</sup>

Similarly, following PE acquisitions in the three specialties with the largest number of PE acquisitions between 2016–2020 (dermatology, gastroenterology, and ophthalmology), PE acquisitions increased the clinician replacement ratio, indicating higher physician churn at PE-acquired practices. Additionally, there was a notable rise in the hiring of advanced practice providers, such as nurse practitioners and physician assistants, who serve as lower-cost alternatives to physicians.<sup>56</sup> This shift suggests a strategic move by PE firms to lower operational costs post acquisition which may have implications for care delivery and practice management, and are yet to be studied.

# Potential Policy Options to Address Consolidation in Healthcare

## 1. Enhance Antitrust Scrutiny and Transparency



## Increase scrutiny of smaller transactions that fall below the Hart–Scott–Rodino (HSR) reporting threshold as well as vertical and cross–market consolidation.

Many healthcare acquisitions fall below the HSR threshold (\$119.5 million in 2024)<sup>57</sup> and go unreviewed. Hence, under the radar acquisitions by PE firms, health systems, payers like UnitedHealth's Optum and CVS–Aetna, and retailers like Walmart and Amazon go unchecked allowing consolidation without oversight.

Reforming antitrust disclosure and reporting requirements for emerging forms of consolidation is key. For example, lowering the HSR threshold or combining the value of serial transactions, would provide greater visibility to enforcement authorities. This policy must be accompanied with increased funding for antitrust agencies to accommodate for the increased oversight.<sup>58</sup> Moreover, enforcing the authority of the FTC's Merger Retrospective Program to develop legal strategies against vertical and cross–market mergers are essential given the complexity and lack of legal precedent for vertical mergers as compared to horizontal mergers.

Numerous states are enacting so–called "mini–HSRs" to monitor healthcare consolidation beyond the federal HSR standards. In 2024,, Indiana passed a law that requires reporting of transactions involving parties with \$10 million in total assets, including out of state holdings. Other states, such as California,<sup>59</sup> Washington,<sup>60</sup> Connecticut,<sup>61</sup> Rhode Island,<sup>62</sup> New York<sup>63</sup>, and Massachusetts,<sup>64</sup> have similar requirements for pre–notification of certain physician transactions that fall below the HSR threshold. Going further, Oregon<sup>65</sup> passed a law in 2021 enabling the state authorities to block or impose conditions on transactions that fall below the threshold.. These state oversight programs scrutinize a broader array of transactions, such as management services agreements, joint ventures, affiliations, and even service closures. Extending beyond traditional antitrust review, they assess the impact of covered transactions on healthcare affordability, access, quality, workforce, and equity.<sup>66,67</sup>

## Enhance ownership transparency: an essential piece of healthcare transparency.

Complex corporate structures currently obscure PE and corporate investors' identities, hindering effective oversight.<sup>68</sup> Establishing a centralized national database for practice ownership and control can help patients and stakeholders understand the impact of PE and corporate investment on healthcare, including changes in prices, utilization, and quality of care. Despite improvements in settings like nursing homes, significant gaps remain in ownership transparency, necessitating robust reporting measures on ownership and control relationships for better accountability.<sup>69</sup>

## 2. Payment Reforms to Regulate Consolidation

### Expand site–neutral payment policy to reduce incentives for vertical

## **hospital–physician consolidation.**

Although Medicare's site–neutral payment reform aims to standardize rates regardless of service location, it has yet to extend to all off–campus physician offices owned by hospitals and eliminate exceptions for grandfathered locations. Moreover, expanding site–neutral payments to the commercial insurance market is also crucial. Additionally, in order to ban unwarranted facility fees, one step would be to improve transparency by requiring unique provider identifiers or direct billing for hospital–owned physician offices will support these reforms and enhance oversight.<sup>70</sup>

## **Strengthen legislative & regulatory frameworks to close existing payment loopholes exploited by PE, particularly in Medicare.**

Reforming Medicare's Part B payment formula can reduce overuse and unnecessary spending on expensive medications—a profit strategy used by PE–acquired practices, such as ophthalmology. Additionally, tightening regulations on risk–adjustment systems, increasing audits in Medicare Advantage and ACO programs, and tightening medical loss ratio regulations will deter vertically consolidated insurance conglomerates from payment exploitation and from hiding profits through related party transfers to subsidiary PBMs, pharmacies, and provider groups.<sup>71</sup>

### **3. Address Vertical Integration and Anti–Competitive Practices**

#### **Banning of anticompetitive provider–payer contracting terms**

Contract provision such as all–or–nothing contracting, anti–tiering clauses, Most–favored–nation (MFN) clauses and gag clauses are often used by dominant health systems to leverage their market power and force insurers into unfavorable agreements. These terms limit the insurer's ability to negotiate lower prices and create high–quality, cost–effective provider networks for consumers. In response, several states have adopted the [model legislation proposed by National Academy for State Health Policy \(NASHP\)](#) which provides policy tools to ban these anticompetitive contracting practices.

#### **Mandate disclosures of intercompany transfers to prevent MLR gaming**

The Medical Loss Ratio (MLR) caps insurer's profits by ensuring that at least 85% of premium revenue is spent on patient care such as on medical claims and activities to improve healthcare quality (as opposed to on profits or administrative costs). However, vertically consolidated insurers circumvent MLR caps through intercompany transfers. This might be done by paying their own affiliates above market prices and hence direct their premium revenues as “medical costs”. Given that these affiliates are not constrained to MLR restrictions, vertically integrated insurers are able to hide profits from regulatory scrutiny.

In order to curb the above–mentioned MLR gaming, Congress could mandate the disclosure of intercompany transfer prices and set benchmarks to ensure that vertically integrated healthcare entities are paying fair market rates to their subsidiary companies while also ensuring a level

playing field for independent providers.<sup>71,72</sup>

## A “Glass–Steagall” for healthcare

The Glass–Steagall Act was enacted in 1933 in response to the Great Depression but was repealed in the 1990s. The Act ensured the separation of the commercial and investment banks to limit risk-taking activities of financial institutions. Enacting a Glass–Steagall Act for healthcare would prevent insurers, PBMs, and other healthcare entities from owning pharmacies or provider groups. This separation between parties whose relationship poses a conflict of interest, would limit anti-competitive tactics used by vertically integrated healthcare entities such as beneficiary risk upcoding and patient steering within the integrated system. Moreover, it is also important to note that such structural separation should be effective retrospectively and prospectively, to avoid favoring existing consolidated markers over newer entrants.<sup>16,73</sup>

### 4. Strengthen Enforcement of Existing Laws

#### Strengthen laws to protect physicians’ clinical and professional autonomy by enhancing prohibitions on the corporate practice of medicine and restricting physician non-competes clauses.

While current “[corporate practice of medicine](#)” laws prevent nonprofessionals from owning medical practices, PE investors often circumvent these bans through management services organizations. [Strengthening these prohibitions](#) would enable professional practices to maintain control over key business and clinical decisions. Moreover, tightening non-competes clauses as the FTC<sup>74</sup> and various states<sup>75</sup> are trying to do is essential to ensure physician mobility, protect the clinical workforce from clauses that deter them from voicing our unethical practices, and maintain patient care continuity.<sup>76</sup>

#### Strengthen enforcement of existing fraud and abuse laws.

PE firms' profit-driven incentives often lead to overutilization, overbilling, upcoding, and self-referrals, while Medicare Advantage organizations may acquire practices to inflate diagnosis codes for higher payments. Stricter enforcement of existing fraud and abuse laws (e.g., False Claims Act, Stark Law, and Anti-Kickback Statute) would penalize these fraudulent activities. Additionally, holding investor-backed management companies liable is crucial, as their active control over portfolio practices indicates their knowing participation in improper conduct.

#### Strengthen the No Surprises Act.

To strengthen the No Surprises Act (NSA), enhancements are needed to prevent abuse of the independent dispute resolution (IDR) mechanism. Recent data<sup>77</sup> shows that nearly 80% of disputes, mostly initiated by PE-backed providers, result in reimbursements above the median in-network rate, overloading and weakening the IDR process. Tightening regulations around IDR

can curtail these abuses and ensure the NSA effectively bans surprise out-of-network billing by PE-backed physician staffing firms.

## References

1. Fulton BD. Health Care Market Concentration Trends In The United States: Evidence And Policy Responses. *Health Affairs*. 2017;36(9):1530–1538. <https://doi.org/10.1377/hlthaff.2017.0556>
2. 95% of U.S. health insurance markets are “highly concentrated. *American Medical Association*. Published January 10, 2024. Accessed April 18, 2024.
3. Schwartz K, Lopez E, Rae M, Neuman T. *What We Know About Provider Consolidation*. KFF. September 2, 2020. Accessed March 12, 2024.
4. Wager E, McGough M, Rakshit S, Amin K, Cox C. How does health spending in the U.S. compare to other countries? Peterson-KFF Health System Tracker. Published January 23, 2024. <https://www.healthsystemtracker.org/chart-collection/health-spending-u-s-compare-countries/#Health%20expenditures%20per%20capita>
5. Appelbaum E, Batt R. Private Equity Buyouts in Healthcare: Who Wins, Who Loses? Center for Economic and Policy Research Working Paper No. 118. Published 2020. Accessed March 13, 2024. <https://www.cepr.net/report/private-equity-buyouts-in-healthcare-who-wins-who-loses/>
6. Kannan S, Bruch JD, Song Z. Changes in Hospital Adverse Events and Patient Outcomes Associated With Private Equity Acquisition. *JAMA*. 2023;330(24):2365–2375. <https://doi.org/10.1001/jama.2023.23147>
7. Gupta A, Howell ST, Yannelis C, Gupta A. Does Private Equity Investment in Healthcare Benefit Patients? Evidence from Nursing Homes. National Bureau of Economic Research Working Paper No. 28474. February 2021. <https://www.nber.org/papers/w28474>
8. Johnson G, Frakt A. 2020. Hospital Markets in the United States, 2007–2017. *Healthcare* 8 (3): 100445. <https://doi.org/10.1016/j.hidsi.2020.100445>
9. Guardado JR, Kane CK. *Competition in Health Insurance: A Comprehensive Study of U.S. Markets*. American Medical Association; 2023. <https://www.ama-assn.org/system/files/competition-health-insurance-us-markets.pdf>
10. Damberg CL. *Health Care Consolidation: The Changing Landscape of the U.S. Health Care System*. RAND; 2023. <https://www.rand.org/pubs/testimonies/CTA2770-1.html>
11. Liu JL, Levinson ZM, Zhou A, Zhao X, Nguyen P, Qureshi N. Environmental Scan on Consolidation Trends and Impacts in Health Care Markets. *Rand Health Q*. 2023;10(3):2. Published 2023 Jun 16.
12. U.S. Federal Trade Commission Office of Policy Planning. *Pharmacy Benefit Managers: The Powerful Middlemen Inflating Drug Costs and Squeezing Main Street Pharmacies*; 2024. [https://www.ftc.gov/system/files/ftc\\_gov/pdf/pharmacy-benefit-managers-staff-report.pdf](https://www.ftc.gov/system/files/ftc_gov/pdf/pharmacy-benefit-managers-staff-report.pdf)
13. *FTC v. U.S. Anesthesia Partners, Inc.* (2023). [https://www.ftc.gov/system/files/ftc\\_gov/pdf/2010031usapcomplaintpublic.pdf](https://www.ftc.gov/system/files/ftc_gov/pdf/2010031usapcomplaintpublic.pdf)
14. Brown B, O'Donnell E, Casalino LP. Private Equity Investment in Behavioral Health Treatment Centers. *JAMA Psychiatry*. 2020;77(3):229–230. <https://doi.org/10.1001/jamapsychiatry.2019.3880>
15. Teno JM. Hospice Acquisitions by Profit-Driven Private Equity Firms. *JAMA Health Forum*. 2021;2(9):e213745. Published 2021 Sep 3. <https://doi.org/10.1001/jamahealthforum.2021.3745>
16. Brown Fuse EC. Hearing on Strengthening U.S. Economic Leadership: The Role of Competition in Enhancing Economic Resiliency. June 5, 2024. [https://cahpr.sph.brown.edu/sites/default/files/documents/Erin%20Fuse%20Brown%20Testimony%20before%20Senate%20Judiciary%20Committee\\_6.3.24%20\(1\).pdf](https://cahpr.sph.brown.edu/sites/default/files/documents/Erin%20Fuse%20Brown%20Testimony%20before%20Senate%20Judiciary%20Committee_6.3.24%20(1).pdf)
17. Richards MR, Whaley CM. Hospital behavior over the private equity life cycle. *Journal of Health Economics*. 2024;97:102902–102902. doi:<https://doi.org/10.1016/j.jhealeco.2024.102902>
18. Grant Thornton. The growing role of private equity in healthcare. Grant Thornton. Published September 26, 2023. <https://www.grantthornton.com/insights/articles/health-care/2023/the-growing-role-of-private-equity-in-healthcare>
19. Brown EF, Adler L, Duffy E, Ginsberg PB, Hall M, Valdez S. *Private Equity Investment as a Divining Rod for Market Failure: Policy Responses to Harmful Physician Practice Acquisitions*. USC–Brookings Schaeffer Initiative for Health Policy; 2021.
20. Rosen BF. Sale to Private Equity – Part 2 | Gordon Feinblatt LLC. [www.gfrlaw.com](http://www.gfrlaw.com). Published December 2020. Accessed July 29, 2024. <https://www.gfrlaw.com/what-we-do/insights/sale-private-equity-part-2>
21. Rooke-Ley H, Shah S, Fuse Brown EC. Medicare Advantage and Consolidation's New Frontier — The Danger of UnitedHealthcare for All. *The New England Journal of Medicine*. 2024;391:97–99. doi:<https://doi.org/10.1056/nejmp2405438>
22. Arnold D, Whaley CM. 2024. Who Pays for Health Care Costs? The Effects of Health Care Prices on Wages. Under Review. July 2024.
23. Arnold DR, King JS, Fulton BD, et al. New evidence on the impacts of cross-market hospital mergers on commercial prices and measures of quality. *Health Services Research*. Published online April 23, 2024. <https://doi.org/10.1111/1475-6773.14291>
24. Fulton BD, Arnold DR, King JS, Montague AD, Greaney TL, Scheffler RM. The Rise Of Cross-Market Hospital Systems And Their Market Power In The US. *Health Affairs*. 2022;41(11):1652–1660. <https://doi.org/10.1377/hlthaff.2022.00337>

25. Dafny L, Ho K, Lee RS. The price effects of cross-market mergers: theory and evidence from the hospital industry. *The RAND Journal of Economics*. 2019;50(2):286–325. <https://doi.org/10.1111/1756-2171.12270>
26. Lin H, McCarthy IM, Richards M. Hospital Pricing Following Integration with Physician Practices. *Journal of Health Economics*. 2021;77:102444. doi:<https://doi.org/10.1016/j.jhealeco.2021.102444>
27. Post B, Norton EC, Hollenbeck BK, Ryan AM. Hospital-physician integration and risk-coding intensity. *Health Economics*. 2022;31(7):1423–1437. doi:<https://doi.org/10.1002/hec.4516>
28. Baker LC, Bundorf MK, Kessler DP. Vertical Integration: Hospital Ownership Of Physician Practices Is Associated With Higher Prices And Spending. *Health Affairs*. 2014;33(5):756–763. <https://doi.org/10.1377/hlthaff.2013.1279>
29. Liu JL, Levinson ZM, Zhou A, Zhao X, Nguyen P, Qureshi N. Environmental Scan on Consolidation Trends and Impacts in Health Care Markets. *RAND*; 2022. [https://www.rand.org/pubs/research\\_reports/RRA1820-1.html](https://www.rand.org/pubs/research_reports/RRA1820-1.html)
30. Scheffler RM, Arnold DR, Whaley CM. Consolidation Trends In California’s Health Care System: Impacts On ACA Premiums And Outpatient Visit Prices. *Health Affairs*. 2018;37(9):1409–1416. <https://doi.org/10.1377/hlthaff.2018.0472>
31. Richards MR, Seward J, Whaley CM. Treatment consolidation after vertical integration | Evidence from outpatient procedure markets. *RAND*. Published online July 2020.[https://www.rand.org/pubs/working\\_papers/WRA621-1.html](https://www.rand.org/pubs/working_papers/WRA621-1.html)
32. Whaley CM, Zhao X, Richards M, Damberg CL. Higher Medicare Spending On Imaging And Lab Services After Primary Care Physician Group Vertical Integration. *Health Affairs*. 2021;40(5):702–709. <https://doi.org/10.1377/hlthaff.2020.01006>
33. Fuse Brown EC, Hall MA. Private Equity and the Corporatization of Health Care. *Stanford Law Review*. Published March 31, 2024. Accessed May 1, 2024. <https://www.stanfordlawreview.org/print/article/private-equity-and-the-corporatization-of-health-care/>
34. Neprash HT, Chernew ME, Hicks AL, Gibson T, McWilliams JM. Association of Financial Integration Between Physicians and Hospitals With Commercial Health Care Prices. *JAMA Intern Med*. 2015;175(12):1932–1939. <https://doi.org/10.1001/jamainternmed.2015.4610>
35. Capps C, Dranove D, Ody C. The effect of hospital acquisitions of physician practices on prices and spending. *J Health Econ*. 2018;59:139–152. <https://doi.org/10.1016/j.jhealeco.2018.04.001>
36. Whaley CM, Zhao X. The effects of physician vertical integration on referral patterns, patient welfare, and Market Dynamics. *Journal of Public Economics*. 2024;238:105175. doi:[10.1016/j.jpubeco.2024.105175](https://doi.org/10.1016/j.jpubeco.2024.105175)
37. Liu T. Bargaining with Private Equity: Implications for Hospital Prices and Patient Welfare. *SSRN Electronic Journal*. Published online 2021. doi:<https://doi.org/10.2139/ssrn.3896410>
38. Nie J, Hsiang W, Lokeshwar SD, et al. Association Between Private Equity Acquisition of Urology Practices and Physician Medicare Payments. *Health Services Research*. 2022;167. doi:<https://doi.org/10.1016/j.jurology.2022.03.045>
39. Singh Y, Song Z, Polsky D, Bruch JD, Zhu JM. Association of Private Equity Acquisition of Physician Practices With Changes in Health Care Spending and Utilization. *JAMA Health Forum*. 2022;3(9):e222886. doi:[10.1001/jamahealthforum.2022.2886](https://doi.org/10.1001/jamahealthforum.2022.2886)
40. Scheffler RM, Alexander L, Fulton BD, Arnold DR, Abdelhadi OA. *MONETIZING MEDICINE: PRIVATE EQUITY AND COMPETITION IN PHYSICIAN PRACTICE MARKETS*. American Antitrust Institute, the Nicholas C. Petris Center on Health Care Markets and Consumer Welfare, University of California, Berkeley, and the Washington Center for Equitable Growth; 2023.
41. Yu J, Tyler Braun R, Bond AS, et al. Physician Management Companies and Neonatology Prices, Utilization, and Clinical Outcomes. *Pediatrics*. 2023;151(4):e2022057931. doi:[10.1542/peds.2022-057931](https://doi.org/10.1542/peds.2022-057931)
42. Singh Y, Aderman CM, Song Z, Polsky D, Zhu JM. Increases in Medicare Spending and Use after Private Equity Acquisition of Retina Practices. *Ophthalmology*. 2024;131(2):150–158. <https://doi.org/10.1016/j.ophtha.2023.07.031>
43. Mattingly TJ, Hyman DA, Bai G. Pharmacy Benefit Managers: History, Business Practices, Economics, and Policy. *JAMA Health Forum*. 2023;4(11):e233804. doi:[10.1001/jamahealthforum.2023.3804](https://doi.org/10.1001/jamahealthforum.2023.3804)
44. Rooke-Ley H, Shah S, Fuse Brown EC. Medicare Advantage and Consolidation’s New Frontier — The Danger of UnitedHealthcare for All. *The New England Journal of Medicine*. 2024;391:97–99. doi:<https://doi.org/10.1056/nejmp2405438>
45. Complaint: *Emanate Health v. Optum Health*. 2023 (<https://www.documentcloud.org/documents/24174225-govuscourtscacd90626710>).
46. Batt R, Applebaum E, Katz T. The Role of Public REITs in Financialization and Industry Restructuring (Institute for New Economic Thinking Working Paper No 189). Published online July 9, 2022. <https://doi.org/10.36687/inetwp189>
47. The Massachusetts Department of Public Health. Steward Health Care transitions. *Mass.gov*. 2024. Accessed September 17, 2024. <https://www.mass.gov/steward-health-care-transitions>.
48. Beaulieu ND, Dafny LS, Landon BE, Dalton JB, Kuye I, McWilliams JM. Changes in Quality of Care after Hospital Mergers and Acquisitions. *New England Journal of Medicine*. 2020;382(1):51–59. doi:<https://doi.org/10.1056/nejmsa1901383>
49. Mariani M, Sisti LG, Isonne C, et al. Impact of hospital mergers: a systematic review focusing on healthcare quality measures. *Eur J Public Health*. 2022;32(2):191–199. doi:[10.1093/eurpub/ckac002](https://doi.org/10.1093/eurpub/ckac002)
50. Hayford TB. The impact of hospital mergers on treatment intensity and health outcomes. *Health Serv Res*. 2012;47(3 Pt 1):1008–1029. doi:[10.1111/j.1475-6773.2011.01351.x](https://doi.org/10.1111/j.1475-6773.2011.01351.x)
51. Jiang HJ, Fingar KR, Liang L, Henke RM, Gibson TP. Quality of Care Before and After Mergers and Acquisitions of Rural Hospitals. *JAMA Network Open*. 2021;4(9):e2124662. doi:<https://doi.org/10.1001/jamanetworkopen.2021.24662>
52. McCarthy S, Sheehan-Connor D. The effect of hospital-physician integration on hospital costs. *Health Economics*. 2022;31(11):2333–2368. doi:<https://doi.org/10.1002/hec.4584>

53. Cerullo M, Yang K, Joynt Maddox KE, McDevitt RC, Roberts JW, Offodile AC. Association Between Hospital Private Equity Acquisition and Outcomes of Acute Medical Conditions Among Medicare Beneficiaries. *JAMA Netw Open*. 2022;5(4):e229581. doi:10.1001/jamanetworkopen.2022.9581
54. Ambar La Forgia, Bodner J. Corporate Ownership and Firm Performance: Evidence from Fertility Clinics. *Academy of Management Proceedings*. 2023;2023(1). doi:https://doi.org/10.5465/amproc.2023.11712abstract
55. Prager E, Schmitt M. Employer Consolidation and Wages: Evidence from Hospitals. *American Economic Review*. 2021;111(2):397–427. doi:https://doi.org/10.1257/aer.20190690
56. Bruch JD, Foot C, Singh Y, Song Z, Polsky D, Zhu JM. Workforce composition in private equity–acquired versus non–private equity–acquired physician practices. *Health Affairs*. 2023;42(1):121–129. https://doi.org/10.1377/hlthaff.2022.00308
57. New HSR thresholds and filing fees for 2024. Federal Trade Commission. Published February 1, 2024. Accessed March 13, 2024. https://www.ftc.gov/enforcement/competition-matters/2024/02/new-hsr-thresholds-filing-fees-2024
58. Fuse Brown EC, Gudiksen KL. Models for Enhanced Health Care Market Oversight — State Attorneys General, Health Departments, and Independent Oversight Entities. The Milbank Memorial Fund. January 2024. https://www.milbank.org/publications/models-for-enhanced-health-care-market-oversight-state-attorneys-general-health-departments-and-independent-oversight-entities/
59. Cal. Health & Safety Code §§ 127507–127507.6; 22 Cal. Code of Regs. §§ 97431–97442.
60. See Wash. Rev. Code §§ 19.390.010 *et seq.*
61. See Conn. Gen. Stat. §§ 19a–486i *et seq.*
62. See R.I. Gen. Laws § 23–17.14–7
63. See NY Pub. Health L. §§ 4550 *et seq.*
64. See Mass. Gen. Laws ch. 6D § 13.
65. See Or. Rev. Stat. §§ 415.500 *et seq.*
66. Veltri V, Hensley–Quinn M. Addressing Corporatization of Health Care, Consolidation, and Closures: Updated NASHP Market Oversight Model Legislation – NASHP. NASHP. Published July 29, 2024. Accessed September 18, 2024. https://nashp.org/addressing-corporatization-of-health-care-consolidation-and-closures-updated-nashp-market-oversight-t-model-legislation/
67. Fuse Brown EC, Gudiksen KL. Models for Enhanced Health Care Market Oversight — State Attorneys General, Health Departments, and Independent Oversight Entities. The Milbank Memorial Fund. January 2024.
68. Singh Y, Fuse Brown EC. The Missing Piece In Health Care Transparency: Ownership Transparency. *Health Affairs Forefront*. Published online September 23, 2022.
69. Chen AC, Skinner RJ, Robert Tyler Braun, R. Tamara Konetzka, Stevenson DG, Grabowski DC. New CMS Nursing Home Ownership Data: Major Gaps And Discrepancies. *Health Affairs*. 2024;43(3):318–326. https://doi.org/10.1377/hlthaff.2023.01110
70. Fuse Brown EC. Health Care Consolidation: Background, Consequences, and Policy Levers. Alliance for Fair Health Pricing; 2023. https://allianceforfairhealthpricing.org/publications/health-care-consolidation-report/
71. Frank RG, Milhaupt C. Related businesses and preservation of Medicare’s Medical Loss Ratio rules. *Brookings*. Published June 29, 2023. Accessed May 1, 2024. https://www.brookings.edu/articles/related-businesses-and-preservation-of-medicare-medical-loss-ratio-rules/
72. Rooke–Ley H. *Medicare Advantage and Vertical Consolidation in Health Care*. American Economic Liberties Project; 2024. https://www.economicliberties.us/wp-content/uploads/2024/04/Medicare-Advantage-AELP.pdf
73. Brown Fuse EC. Addendum to Hearing on Strengthening U.S. Economic Leadership: The Role of Competition in Enhancing Economic Resiliency. June 27, 2024. [https://cahpr.sph.brown.edu/sites/default/files/documents/ACFrOgBz00X51a0iRI27QQ8Au\\_5ifn-0X4XnlDPsSYO5hJ0\\_cVXbi8-Fls9DFTtZG\\_kcP-WLDDrRXt6AYPdUPLApugWDTXjggUOAWliqFJ2FuwGuaOw1Cf6YFUQatTJEax6OgmwWI6CufTRQ8Mj.pdf](https://cahpr.sph.brown.edu/sites/default/files/documents/ACFrOgBz00X51a0iRI27QQ8Au_5ifn-0X4XnlDPsSYO5hJ0_cVXbi8-Fls9DFTtZG_kcP-WLDDrRXt6AYPdUPLApugWDTXjggUOAWliqFJ2FuwGuaOw1Cf6YFUQatTJEax6OgmwWI6CufTRQ8Mj.pdf)
74. Federal Trade Commission. FTC Announces Rule Banning Noncompetes. Federal Trade Commission. Published April 23, 2024. https://www.ftc.gov/news-events/news/press-releases/2024/04/ftc-announces-rule-banning-noncompetes
75. State Noncompete Law Tracker. Economic Innovation Group. Published June 25, 2024. Accessed July 29, 2024. <https://eig.org/state-noncompete-map/#:~:text=Noncompetes%20are%20currently%20governed%20at>
76. Fuse Brown EC, Reddy M, Whaley CM. The FTC’s Noncompete Rule: Legal Challenges And Potential Solutions For Physician Markets. *Health Affairs Forefront*. Published online August 30, 2024. doi:https://doi.org/10.1377/forefront.20240828.827737
77. Independent Dispute Resolution Reports. Centers for Medicare & Medicaid Services (CMS); 2024. Accessed March 13, 2024. https://www.cms.gov/nosurprises/policies-and-resources/reports