

**SOARING PRIVATE
EQUITY INVESTMENT
IN THE HEALTHCARE
SECTOR:
CONSOLIDATION
ACCELERATED,
COMPETITION
UNDERMINED, AND
PATIENTS AT RISK**

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All views expressed are solely those of the authors.

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SUMMARY OF MAJOR CONCLUSIONS

- **Private equity investment in healthcare has grown dramatically over the last decade.** Estimated annual deal values have gone from \$41.5 billion in 2010 to 119.9 billion in 2019, for a total of approximately \$750 billion over the last decade. Still, we expect that this rate will only increase in coming years. This explosive growth is being driven by a perfect storm of projected increases in healthcare spending, tremendous stores of uninvested capital already dedicated to private equity funds, and market disruption caused by the COVID-19 pandemic. This investment is disproportionately directed at the outpatient care and home health markets.
- **The private equity business model is fundamentally incompatible with sound healthcare that serves patients.** Private equity funds, by design, are focused on short-term revenue generation and consolidation and not on the care and long-term wellbeing of patients. This in turn leads to pressure to prioritize revenue over quality of care, to overburden health care companies with debt, strip their assets, and put them at risk of long-term failure, and to engage in anticompetitive and unethical billing practices. Adding to the mounting evidence of the negative impact of private equity on healthcare, two recent National Bureau of Economic Research studies of the nursing home and dialysis markets found that private equity ownership is correlated with worse health outcomes and higher prices.
- **Private equity's focus on short-term revenue generation and consolidation undermines competition and destabilizes health care markets.** Private equity companies seek to consolidate health care providers and companies not, primarily, to deliver higher quality healthcare more efficiently, but to engage in financial arbitrage and to gather leverage that can be used to bargain against suppliers, payors, and patients. The result impacts stability and leads to more concentrated and less competitive healthcare markets.
- **Private equity acts as an anti-maverick force in healthcare markets, amplifying and accelerating concentration and anticompetitive practices.** Healthcare markets already face serious concentration and competition problems. Recent empirical work demonstrates why this makes private equity investment in healthcare particularly dangerous to competition. Whereas mavericks counter concentration and anticompetitive tendencies in markets with their disruptive competition, private equity has the opposite effect in markets lacking competition; private equity supercharges existing market concentration and anticompetitive tendencies, as a sort of anti-maverick.
- **Private equity firms operate under the public and regulatory radar.** Private equity is, in a word, private. Most private equity acquisitions in healthcare are not reportable to antitrust or financial regulatory authorities under current law. And, even where transactions are reportable, the complex structure of private equity funds obscures the competitive impact of those deals. As a result, private equity companies operate in healthcare without any effective oversight.

- **Urgent action is needed to oversee, investigate and understand the impact of private equity in healthcare on patients and markets.** Updates by the Federal Trade Commission to antitrust reporting requirements to capture potentially significant healthcare deals by private equity firms and others that currently go un- or under-reported are urgently needed. We also call on the Department of Justice to withdraw guidance suggesting private equity companies are preferred divestiture buyers. Instead, both the Federal Trade Commission and the Department of Justice should incorporate financial risk analysis into healthcare mergers. Finally, we urge the Department of Health and Human Services to consider imposing reporting and approval requirements on healthcare mergers.

I. INTRODUCTION

The explosion in private equity investments in healthcare is a threat to both the structure and the goals of our healthcare system. Our healthcare system is organized on a private for-profit and non-profit basis¹ with a professional, cultural, and legal foundation that places the well-being of patients ahead of the financial interests of the providers and organizations that compose it. There is reason for grave concern that private equity investment could tear this foundation apart.

Private equity investing is characterized by an outsized appetite for risk, a relentless drive to consolidate business, and a singular focus on short-term revenue generation. As the name implies, private equity investing is, for the most part, private. The lack of transparency surrounding private equity investment is deeply concerning; scrutiny to protect the health and safety of populations should be present but is largely lacking. Private equity is a force that is changing how our healthcare system functions, and these changes are happening under the radar.

What we are able to discern about the impact of private equity on healthcare is deeply troubling. Though there may be instances where private equity firms produce value for a health system, hard evidence of these benefits is hard to come by. What is apparent from the anecdotes and studies on private equity in healthcare, so far, is that private equity business practices have caused significant harm to individual healthcare companies, to patients, and to markets, and that there are strong reasons to suspect that additional transparency and further study will reveal deeper, more serious, and growing problems. The American Medical Association has noted that private equity limits the autonomy of doctors—interfering with doctor-patient relationships—the core of our healthcare system.

The surge in private equity investment in healthcare also threatens to undermine the already fragile competition in healthcare markets. Some of the negative impacts on competition result from deliberate, anticompetitive strategies deployed by private equity firms. Other impacts on competition are unintended but foreseeable byproducts of the private equity business model driven by excessive leverage, outsized risk, and the quest for short-term profits. To be sure, healthcare markets have never been models of perfect competition. But, as we document in what follows, private equity firms' increasing involvement in healthcare markets is exacerbating existing competition concerns in healthcare and creating new ones.

Attention to this issue is urgently needed. There has been an explosion of private equity deals in the healthcare sector and a dramatic increase in the magnitude of the impact they are having. It is worth noting that the data on private equity is rough and sometimes incomplete due to the lack of public reporting requirements. Using PitchBook data, which others have used as the best source available, the estimated private equity deal values in healthcare totaled about \$750 billion over the 2010 to 2020 period. In 2019 alone, the total value of private equity deals in healthcare is

¹ The distribution of for-profit and non-profit firms in the US healthcare industry varies by sector. Most hospitals are non-profit, but the majority of physician practices and groups, long term care facilities, and home health agencies are operated on a for-profit basis. The vast majority of health insurance plans are also for-profit as are pharmaceutical companies.

estimated at about \$120 billion. These ballpark figures may well be underestimates because the valuations of many deals are not reported or made public.

As striking as these figures are, we can expect that they will markedly grow in the near future. As the country takes steps toward universal coverage, healthcare spending is expected to grow at an average rate of 5.5 percent per year through 2027. Additionally, weaknesses of the public health system were revealed during the COVID-19 pandemic and long-term health impacts of the pandemic will be felt for years to come. These factors and the continued aging of the population will lead to a substantial expansion of the healthcare sector and healthcare spending.

At the same time, private equity firms are sitting on an enormous amount of “dry powder” — money that could not be profitably invested during the COVID-19 pandemic and attendant market turmoil, but that must be invested soon or returned to investors. A significant share of this money is expected to be invested in healthcare². Simultaneously, the economic impact of the pandemic has made potential private equity targets in healthcare more vulnerable. One can easily imagine that what we have seen in the past decade is only the beginning.

Our report details and measures private equity trends for the overall healthcare sector and provides a deep dive into four particular areas: hospitals and inpatient services, clinics and outpatient services, elderly and disabled care, and pharmaceuticals. However, the data do not tell the complete story. We analyze several concerns by presenting case studies of private equity involvement in healthcare and also report evidence on the impact private equity investment has had on health and quality. Drawing on these data and examples, we identify and analyze the major threats and risks to competition posed by the injection of private equity business practices into healthcare markets. We summarize what state and federal legislators have done to address the financial impacts of such behavior. We then present suggested actions and potential policy solutions.

II. WHY FOCUS ON PRIVATE EQUITY IN HEALTHCARE?

One might reasonably ask why we focus on private equity in healthcare, instead of other business models or other markets. The short answer is that when the fundamental characteristics of the private equity business model are combined with the unique structure of the United States healthcare market, the results are potentially catastrophic for healthcare providers, consumers, and the stability of the healthcare supply chain. And, because the consequences in healthcare involve not just dollars but lives, these potential harms must not be ignored.

There is a longstanding debate about whether healthcare should be run like a for-profit business, at all.³ Strong reasons weigh against treating healthcare like any other private business venture.⁴

² In 2020, 18% of all private equity buyouts in the US were in the healthcare industry. See Figure 2.

³ Horwitz, J. R. (2005). Making Profits And Providing Care: Comparing Nonprofit, For-Profit, And Government Hospitals. *Health Affairs*, 24(3), 790–801. <https://doi.org/10.1377/hlthaff.24.3.790>; Relman, A.S., & Reinhardt U.E. (1986), Debating for-profit healthcare and the ethics of physicians. *Health Aff (Millwood)*, *Health Affairs* 5(2), 5–31. <https://doi.org/10.1377/hlthaff.5.2.5>.

⁴ Our recognition and argument that health care should not be treated the same as any other line of business should not be misunderstood as an endorsement of nonprofit health care companies or their business practices. Nonprofit status is a tax designation with certain requirements to reinvest any profits in the underlying business. But, healthcare nonprofits are not immune from engaging in anticompetitive or otherwise harmful business practices at the expense of patients, payers, and markets. Likewise,

Health is a public good with externalities both positive and negative. Healthcare may be seen as a public good because roughly half of national health expenditure is financed by the government.⁵ The externalities from healthcare were laid bare during the pandemic. Wearing a mask protects others and slows the spread of COVID 19. This helps us all as we move toward herd immunity. Likewise, organizations driven only by profit do not maintain sufficient capacity to effectively handle health emergencies such as a pandemic, as we saw with the shortage of ICU beds and ventilators.⁶ Mental health problems that are untreated can have impacts on families and the public as we have seen in the rash of shootings. These are not things that a private for-profit-only market considers.

The healthcare system also differs significantly from most businesses because it is structured to deal with the lack of knowledge by patients in what they are buying and treatments they receive. Trust is the foundation of our healthcare system. Patients must trust doctors to have their best interests in mind when providers recommend treatment. Doctors are trusted to help the patient make the best decision for their health and not to maximize profits. Profit-based healthcare threatens this trust. Healthcare, at least in the United States, is also notorious for the fact that the people receiving the goods and services (patients) are not the ones that primarily pay for the goods and services (insurers and government payors). This multi-layered payment model means that healthcare markets function very differently than the classic market for widgets.

There are also many reasons why private equity's approach to businesses of all sorts has significant negative repercussions and needs to be scrutinized, corralled, and, in some instances, curtailed. Because of the way private equity firms are structured, they have tremendous incentives to prioritize short-term profits and consolidation of markets, and to take outsized risks to achieve both.

Private equity funds are pools of capital organized as partnerships and are managed by private equity fund managers who act as general partners.⁷ The general partner typically supplies two percent of the capital of the fund. The limited partners, typically pension funds and other institutional investors act as limited partners and provide 20-30% of the capital. The remaining 70-80% of the capital for a typical private equity fund is debt equity supplied by banks and secured by the assets of the companies in which the fund invests. The private equity manager receives a management fee equal to around two percent of the assets managed and also typically receives 20% of any return on capital above a certain threshold. As others have noted, this financial structure sets up a moral hazard, whereby the fund manager is entitled to large fees regardless of the funds' performance and whereby the fund manager puts little of its own capital at risk but

the requirement that nonprofits reinvest their gains in the business is not a requirement that those funds be invested efficiently or in the manner that best benefits patients or the public. Richman, B. D. (2007). Antitrust and Nonprofit Hospital Mergers: A Return to Basics, 156. *University of Pennsylvania Law Review* 121-150.

⁵ Centers for Medicare & Medicaid Services. (n.d.). NHE Fact Sheet | CMS. Retrieved May 1, 2021, from <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NHE-Fact-Sheet>

⁶ Moss, D. L. (2020, March 31). Can Competition Save Lives? The Intersection of COVID-19, Ventilators, and Antitrust Enforcement. American Antitrust Institute. <https://www.antitrustinstitute.org/work-product/can-competition-save-lives-the-intersection-of-covid-19-ventilators-and-antitrust-enforcement/>

⁷ For an in-depth examination of the structures, business models, and compensation structures of private equity funds, see generally Appelbaum, E., & Batt, R. (2014). *Private Equity at Work: When Wall Street Manages Main Street*. Russell Sage Foundation.

enjoys a large share of any profits.⁸ As a result, fund managers have tremendous incentives to take on large amounts of risk, because the vast majority of the cost of failure is born by the limited partners, the banks, and the portfolio companies in which the fund invests. It is not surprising that private-equity-owned companies are at increased risk of bankruptcy as well as financial distress short of bankruptcy.

The structure of the typical private equity fund also incentivizes managers to focus on specific financial goals: consolidation and short-term revenue generation. There are two primary reasons for this. First, when a private equity fund is formed, it has a pre-determined expiration date. On that date, all of the money must be returned to the investors. The typical lifespan for a private equity fund is 10 years. As a result, the manager tries to maximize the return on the investment over that timeframe. This translates into private equity funds investing in companies for an average of 4-7 years, with a goal of selling (or exiting) the investment at the end of that period for as much as possible. Second, the sale price of the portfolio companies, i.e., the return on the private equity fund's investment, is typically calculated as a multiple of EBIDTA, that is earnings before interest, dividends, taxes, and amortization. This leads to two basic ways for the private equity company to increase its return: increase earnings (i.e., generate more revenue) or increase the multiple to be applied to the EBIDTA. The first path to generate returns incentivizes private equity firms to maximize short-term profits, and the second path incentivizes private equity firms to consolidate smaller companies in the same industry into larger ones.⁹

To generate those short-term profits, PE companies often use financial engineering, unsustainable business practices, and the exploitation of market failures. PE companies push the limits of health and safety regulations and seek out regulatory gray areas that can be exploited. These approaches undermine relationships built on trust,¹⁰ increase market concentration, and put pressure on managers to increase revenue at any cost.

With the exception of a handful of private equity firms that are themselves publicly-traded, private equity funds are very lightly regulated. These funds are private, in the sense that they are not open to investment by the public and are not publicly traded. Likewise, when a private equity fund invests in a publicly traded company, it does so by "taking the company private," at which point the company becomes owned by the fund and is no longer publicly traded. Because the funds and the companies they own are not publicly traded, they are not generally subject to the securities laws. Fund managers who are also licensed securities advisors are subjected to reporting about the private equity funds they manage, but only to the extent of providing top-level financial reporting for systemic financial risk assessment. Finally, because most private equity investments, particularly in healthcare, are relatively small, they fall below the threshold for reporting to the antitrust authorities under the Hart-Scott-Rodino Act. As a result, there is very little oversight of, or even reliable information about, private equity funds and the deals they engage in.

⁸ Several policymakers have suggested placing limits on private equity generally to mitigate this moral hazard by forcing private equity funds to keep more of their capital invested in portfolio companies for a longer period of time. Sen. Warren and Rep. Pocan have included such a proposal in their private equity legislation, discussed in Section VIII, and several other policymakers have voiced support for similar proposals.

⁹ This latter incentive stems from the fact that financiers apply a higher multiple of EBIDTA to larger companies for reasons explained more fully in Section IV.

¹⁰ Appelbaum, E., & Batt, R. (2014). *Private Equity at Work: When Wall Street Manages Main Street*, 84-91.

The application of private equity business models to healthcare represents the deadly intersection of, on the one hand, the debate about whether healthcare is or should be a commercial enterprise and, on the other hand, the debate about whether the private equity business model is good for society and for markets.

Whereas the consequences of the private equity approach generally can lead to lost jobs, the destruction of previously-successful businesses, and decreased competition in any market where private equity is involved, in healthcare the consequences of private equity business tactics can be lost lives, more expensive and lower quality healthcare, and undermining and unsettling already fragile but critically important healthcare business models and markets.

Although private equity in healthcare does sometimes add value, that occasional value comes with enormous costs attached. The point is not that private equity is universally bad for healthcare; rather, our purpose is to highlight the pitfalls and risks from the PE approach to healthcare, and to suggest ways that the most detrimental aspects of the PE approach can be neutralized or mitigated.

III. MEASURING PRIVATE EQUITY INVESTMENTS IN HEALTHCARE

Measuring the trends in private equity investments in healthcare is a daunting task because there are few policies or regulations requiring activity to be reported. Despite the lack of transparency, we still have useful information. Following the foundational work of Appelbaum and Batt, we use PitchBook data to identify the trends in the number of private equity deals in healthcare and their values from 2010 to 2020. We accessed PitchBook on an academic license, and therefore our analyses were not reviewed by PitchBook analysts. In addition to producing the most recent data on private equity investments in healthcare, we also dive deeper into the following sub-sectors of the healthcare industry: hospitals and inpatient services, clinics and outpatient services, elderly and disabled, long-term care, and pharmaceuticals. This analysis highlights significant and troubling activity.

On a macro level, healthcare was the second major sector for private equity investment in 2020, accounting for 18 percent of all reported deals, up from 12 percent in 2010.¹¹ From 2010 to 2020, the number of reported private equity deals soared from 352 to 937, more than a 150% increase.¹² This is likely an undercount as smaller deals are often ignored and not counted.

Deal values are much more difficult to measure because about 86 percent of deal values are not public or reported in the PitchBook data, which is considered the most comprehensive source.¹³ As highlighted in Figure 1, between 2010 and 2019, the total estimated deal values increased from

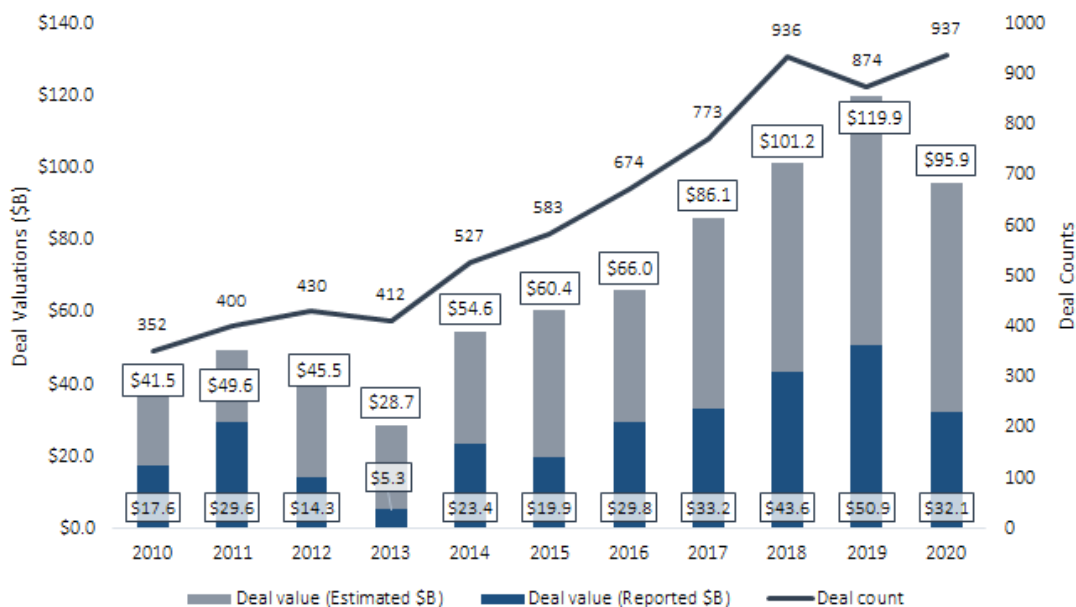
¹¹ See Figure 2, page 8.

¹² See Figure 1, page 7.

¹³ The low percentage of reported deal values raises concerns about the precision of Pitchbook's estimated total deal values. Those concerns are partially mitigated by recognizing that few if any large deals are unreported, because deals above a certain dollar threshold trigger SEC and FTC reporting requirements. Nevertheless, the PitchBook numbers must be taken for what they are: the best available estimate. The lack of transparency regarding private equity deals is one of the major policy concerns we identify in our analysis, and the gaps in the PitchBook data illustrate this concern.

\$41.5 billion to \$119.9 billion, a 189 percent increase.¹⁴ Estimated deal values then dropped to \$95.9 billion in 2020. Figure 1 estimates that total deal value in 2018 was \$101.2 billion, which is consistent with the \$100.4 billion estimated deal total for the same period in Appelbaum and Batt’s 2019 report, “Private Equity Buyouts in Healthcare: Who Wins, Who Loses?” Over the 2010 to 2020 period, estimated deal values totaled \$749.5 billion. As striking as these figures are, we expect that they will markedly grow in the near future.

Figure 1. Total PE Deals in Healthcare* – Reported Deal Value, Estimated Deal Value, and Reported Deal Count, 2010-2020



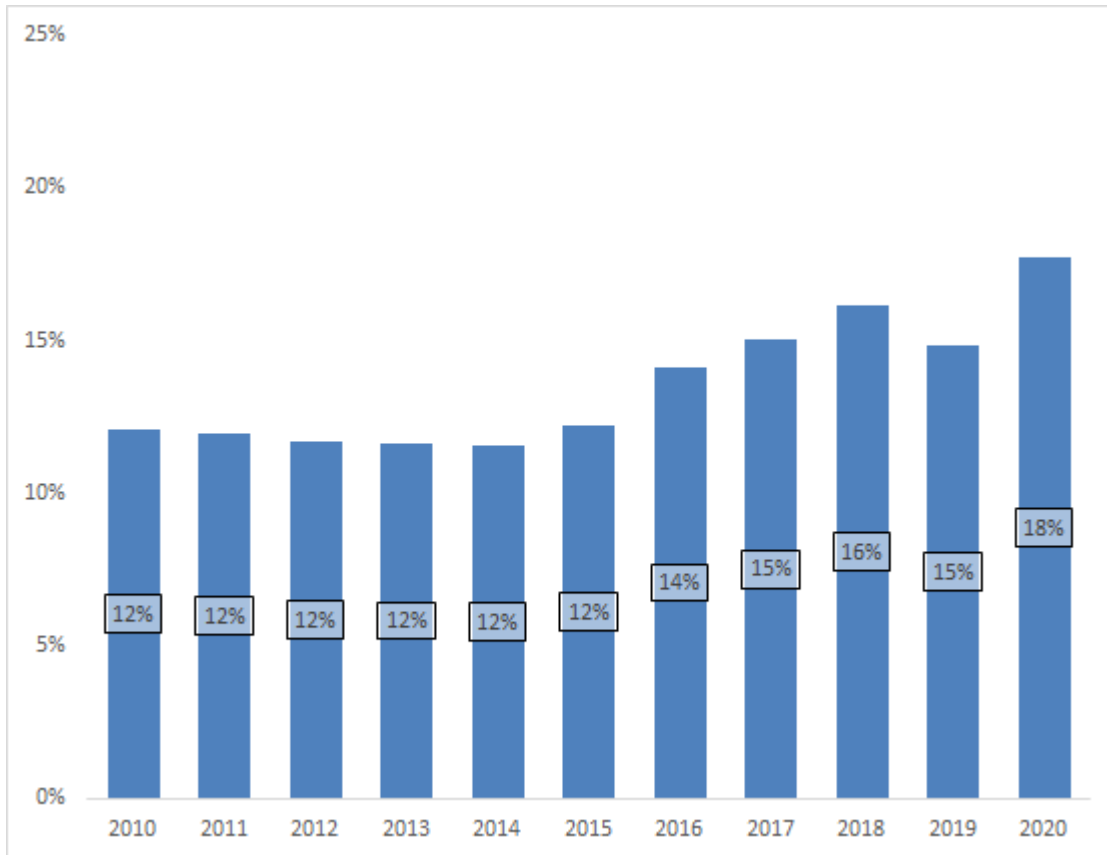
Petris Center/AAI analysis of PitchBook data.

SOURCE: PitchBook Data, Inc. Data has not been reviewed by PitchBook analysts.

NOTE: Data as of 3/30/2021. Valuations are reported in current dollars. Analysis conducted by PitchBook Data, Inc. and provided courtesy of Eileen Appelbaum and Rosemary Batt. The PitchBook database is dynamic and deal counts produced by the same search may vary as underlying data change over time. Deals defined according to Pitchbook’s “standard PE methodology,” including LBOs, add-ons, growth investments and secondary buyouts. Estimated total deal value in current dollars, 2010-2020 = \$749.5 billion, estimated total deal value in Jan. 2020 CPI-adjusted dollars, 2010-2020 = \$805.9 billion

¹⁴ Using real dollars (adjusted for inflation using January 2020 CPI weights), this percent increase was 148%.

Figure 2. Reported PE Buyouts in Healthcare as % of Total Reported PE Buyouts, 2010-2020



Petris Center/AAI analysis of PitchBook data.

SOURCE: PitchBook Data, Inc. Data has not been reviewed by PitchBook analysts.

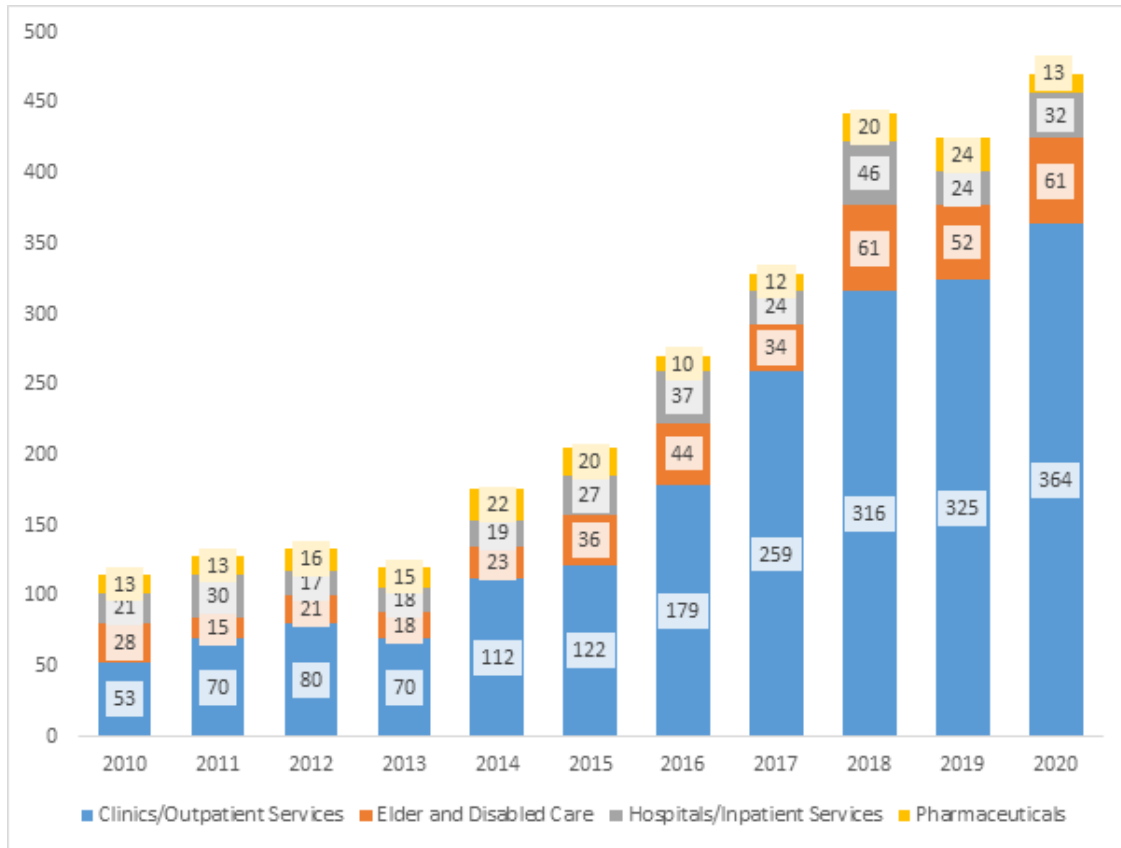
NOTE: Data as of 4/3/2021. PE Buyouts = counts of private equity buyouts in a year. The PitchBook database is dynamic and deal counts produced by the same search on different dates may vary as underlying data change over time.

Although estimated total deal values dropped from 2019 to 2020, the total number of reported private equity deals in US healthcare reached a new peak of 937, with the largest share of deals (364) occurring in the clinics and outpatient sector.¹⁵ This skyward trend in deal counts will likely continue in 2021, particularly in outpatient care, as PitchBook data indicate that the top 10 most active private equity firms in this sector are currently holding \$16 billion in dry powder,¹⁶ and healthcare spending is projected to increase in the next few years, meaning private equity investors can expect high returns on investments.

¹⁵ See Figure 3, page 9.

¹⁶ See Table 1, page 9. Note that this figure does not include the money pledged by some of private equity funds' biggest investors that has been pledged by the investors for direct investment by them through deals arranged by the private equity funds. Gottfried, M., & Dummett, B. (2021, April 21). *Private-Equity Firms Regain Taste for Giant Buyouts*. Wall Street Journal. <https://www.wsj.com/articles/private-equity-firms-regain-taste-for-giant-buyouts-11618997580>

Figure 3. Count of Reported PE Buyouts in Healthcare by Sector, 2010-2020



Petris Center/AAI analysis of PitchBook data.

SOURCE: PitchBook Data, Inc. Data has not been reviewed by PitchBook analysts.

NOTE: Data as of 4/3/2021. Deal counts = counts of private equity buyouts in a year. The PitchBook database is dynamic and deal counts produced by the same search on different dates may vary as underlying data change over time.

The implications of a forecasted increase in private equity investment in healthcare are concerning. The pandemic has weakened many parts of the health system even with financial aid provided by the federal government, and small physician practices and other less capitalized firms in outpatient care may be under particular strain. Private equity firms such as Audax Group (\$5B in dry powder¹⁷) that specialize in growing outpatient care companies¹⁸ through aggressive acquisition strategies may find themselves in a buyer's market as they seek to acquire small physician groups struggling with high overhead costs and pandemic-related debts.

¹⁷ See Table 1, page 9.

¹⁸ See Case Study IV: Advanced Dermatology and Cosmetic Surgery.

Table 1. Top 10 PE Firms by # Clinics/Outpatient Services Buyouts, 2010-2020

PE Firm	# Deals	AUM* (\$M)	Dry Powder** (\$M)
Audax Group	124	16,000	5,038
Shore Capital Partners	119	1,100	421
Waud Capital Partners	81	3,200	1,100
Webster Equity Partners	54	1,760	478
Chicago Pacific Founders	48	1,391	452
New Mainstream Capital	43	1,065	178
Harvest Partners	42	8,343	2,555
Revelstoke Capital Partners	42	2,500	1,123
Linden Capital Partners	41	2,625	1,182
ABRY Partners	39	5,000	3,359
TOTAL	633	42,984	15,887

Petris Center/AAI analysis of PitchBook data.

SOURCE: PitchBook Data, Inc. Data has not been reviewed by PitchBook analysts.

NOTE: Data as of 4/3/2021. Table shows private equity firms ranked by number of buyouts in clinics/outpatient services from 2010-2020.

**AUM" is an abbreviation of assets under management. AUM is a measurement of the total value of firms in a private equity firm's current portfolio.

***"Dry Powder" is a term that indicates the amount of capital a private equity or venture capital firm has on hand to make investments.

Table 2 presents the 10 largest reported private equity buyouts in the healthcare sector from 2010 to 2020. The largest deal during this period was KKR’s 2018 acquisition of Envision for \$9.9 billion. Envision’s subsidiary EmCare, which specializes in emergency department staffing, has drawn scrutiny for its prolific use of balance billing (also known as “surprise billing,” see section VI.C for further discussion). Yale researchers found that EmCare’s pricing practices led to an 83 percent increase in patient cost sharing after EmCare contracted with hospitals.¹⁹ Health IT was responsible for half of the largest deals, and three of the top ten deals involved target firms located in Tennessee, long considered the capital of for-profit healthcare in the US.²⁰

Table 2. Top 10 PE Deals by Value, 2010-2020

Date	Target Name	State	Sub-Industry	Main Acquirer	Current Ownership	Valuation (\$M)	Real Dollars (\$M)
11/10/18	Envision Healthcare Corp	TN	Physician Staffing	KKR & Co Inc	KKR & Co Inc	9,900	10,304
6/1/16	MultiPlan Inc	NY	Health IT	Hellman & Friedman	Publicly Traded	7,500	8,167
11/21/17	VWR International	PA	Lab Materials	Avantor Performance Materials*	Avantor Performance Materials*	6,400	6,799
11/4/11	KCI Holdings	TX	Medical Devices	Apax Partners	3M	6,300	7,380
2/6/17	Team Health Holdings	TN	Physician Staffing	Blackstone Group	Blackstone Group	6,100	6,480
10/4/19	Redcard	MO	Health IT	Zelis Healthcare**	Zelis Healthcare**	6,000	6,149
2/7/19	Athena	MA	Health IT	Veritas Capital	Veritas Capital	5,600	5,739
11/16/18	Health	TN	Hospitals	Apollo Global Management	Apollo Global Management	5,600	5,828
2/26/10	LifePoint Health	NC	Health IT	Fisher Lynch	Publicly Traded	5,081	6,049
10/1/20	IQVIA/IMS Health	VA	Health IT	Veritas Capital	Veritas Capital	5,000	5,000
9/27/17	Gainwell Technologies	MA	Clinical Trials	Pamplona Capital Management	Pamplona Capital Management	5,000	5,312
					TOTAL	68,481	73,206
						17%	17%

Petris Center/AAI analysis of PitchBook data.

SOURCE: PitchBook Data, Inc. Data has not been reviewed by PitchBook analysts.

¹⁹ Cooper, Z., Scott Morton, F., & Shekita, N. (2020). Surprise! Out-of-Network Billing for Emergency Care in the United States. *Journal of Political Economy*, 128(9), 3626–3677. <https://doi.org/10.1086/708819f>

²⁰ *Nashville: The Health Care Industry Capital*. (n.d.). Nashville Health Care Council. <https://healthcarecouncil.com/nashville-health-care-industry/>; Farmer, B. (2019, May 13). Study: Nashville’s For-Profit Hospital Systems Are Among The Most Expensive. WPLN News - Nashville Public Radio. <https://wpln.org/post/study-nashvilles-for-profit-hospital-systems-are-among-the-most-expensive/>

Note: "Real Dollars" uses January 2020 CPI weights to adjust "valuation" column using current purchasing power of \$USD. "Valuation" column indicates deal value in dollars as of the transaction date (also known as "current dollars").

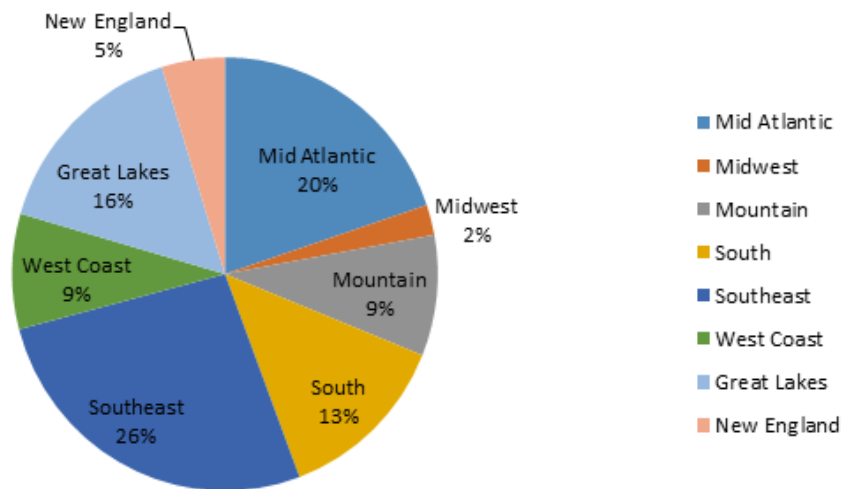
Acquirer/Current Ownership columns indicate firms with majority holdings

* Backed by private equity firms Apollo Investment & New Mountain Capital

** Backed by private equity firms Bain Capital, Edison Partners, Parthenon Capital Partners, Twin Bridge Capital Partners

Figure 3 presents the trend in reported deals in the four sectors of healthcare profiled in the case studies of Section III of our report. Private equity deals in the clinics and outpatient sector increased five-fold from 2010 to 2020. This astonishing rate was followed by a 107 percent increase in private equity deals in elderly and disabled care. Figure 4 also presents the geographic distribution of reported deals in clinics and outpatient care over the same period, indicating that the southeast region (Alabama, Florida, Georgia, Mississippi, North Carolina, Puerto Rico, South Carolinas) was home to the most deals (see Figure 4).

Figure 4. Clinics/Outpatient Services Deals by US Region



Petris Center/AAI analysis of PitchBook data.

SOURCE: PitchBook Data, Inc. Data has not been reviewed by PitchBook analysts.

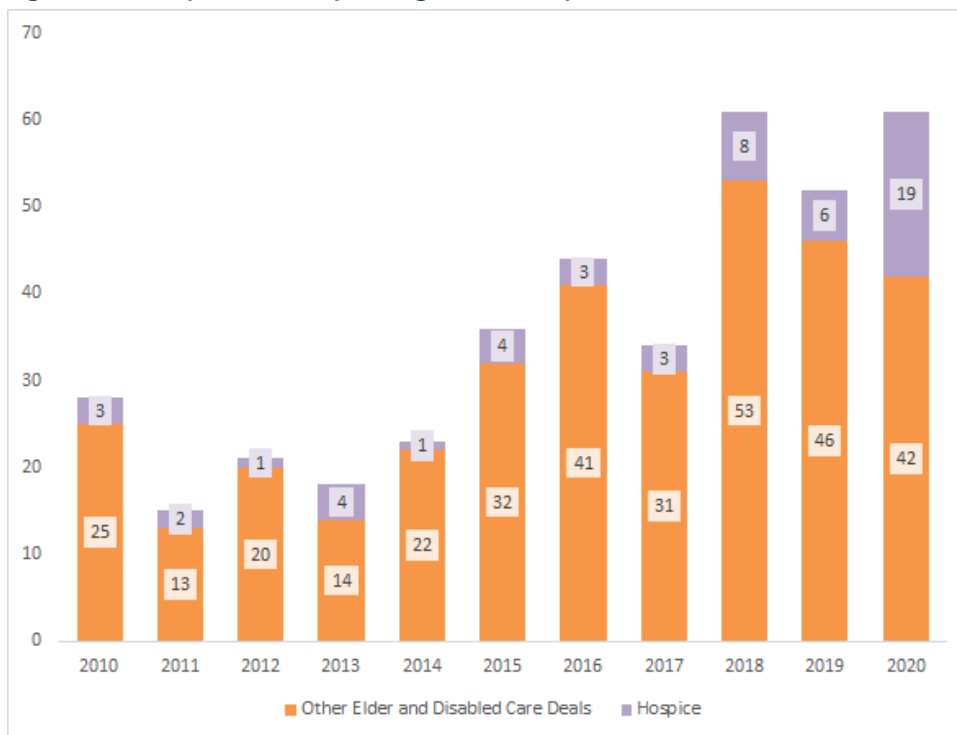
NOTE: Data as of 4/3/2021. Deal counts = counts of private equity buyouts in a year. The PitchBook database is dynamic and deal counts produced by the same search on different dates may vary as underlying data change over time. West Coast: Alaska, California, Hawaii, Oregon, Washington Mountain: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming. Midwest: Iowa, Kansas, Missouri, Nebraska, North Dakota, South Dakota. Great Lakes: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin. New England: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont. Mid-Atlantic: Delaware, DC, Maryland, New Jersey, New York, Pennsylvania, Virginia, West Virginia. South: Arkansas, Kentucky, Louisiana, Oklahoma, Tennessee, Texas. Southeast: Alabama, Florida, Georgia, Mississippi, North Carolina, Puerto Rico, South Carolina

Spurred by a 1.8 percent increase in CMS reimbursements for hospice care in FY 2019 and a rapidly aging population, Figure 5 demonstrates the spike in hospice investments,²¹ increasing from 3 reported deals in 2017, to 19 in 2020. Although no particular strategies detrimental to

²¹ Pifer, R. (2018, October 17). Insurers see broad market opportunities with end-of-life care. Healthcare Dive. <https://www.healthcaredive.com/news/insurers-see-broad-market-opportunities-with-end-of-life-care/532900/>; Parker, J. (2020, June 24). COVID is Delaying Private Equity Hospice Transactions. Hospice News. <https://hospicenews.com/2020/06/24/covid-is-delaying-private-equity-hospice-transactions/>

patients or markets have yet been attributed to private equity backed hospice chains, trends in the long-term care sector do not bode well for patients.^{22, 23} Figure 5 also highlights the speed with which private equity recognizes favorable investments that rapidly develop into trends. Such trends present regulators with a game of regulatory “whack-a-mole,” in the words of health economist Zack Cooper.²⁴ By the time the government typically intervenes, private equity firms have earned billions, and in healthcare this often comes at the cost of patients, as with Envision and balance billing, which was finally addressed by Congress in 2020.²⁵

Figure 5. PE Buyouts in Hospices against All Buyouts in Elder/Disabled Care, 2010-2020



Petris Center/AAI analysis of PitchBook data.

SOURCE: PitchBook Data, Inc. Data has not been reviewed by PitchBook analysts.

NOTE: Data as of 4/3/2021. Deal counts = counts of private equity buyouts in a year. PitchBook database is dynamic and deal counts produced by the same search may vary as underlying data change over time.

Although imperfect, the available data discussed above, demonstrate significant and sustained growth in investment by private equity in the healthcare sector. This growth is observed in deal counts, deal values, and in the share of healthcare in the overall private equity investment portfolio. Outpatient services and elder and disabled care have seen dramatically increasing deal counts, but several huge deals in health IT make clear that this is also a major target for private

²² Gupta, A., Howell, S. T., Yannelis, C., & Gupta, A. (2021). *Does Private Equity Investment in Healthcare Benefit Patients? Evidence from Nursing Homes* (No. w28474). National Bureau of Economic Research. <https://doi.org/10.3386/w28474>

²³ For further discussion on quality and outcomes in nursing homes, see Section IV.

²⁴ Cooper, Z. [@zackcooperYale]. (2021, April 8). There aren't systemic fixes that would address all of these problems. We need to play whack-a-mole and keep fighting to reform each sector. This is where politics intersects with healthcare. Passing laws are tough and these firms can lobby hard [Tweet]. Twitter. <https://twitter.com/zackcooperYale/status/1380155617885700099>

²⁵ Appleby, J. (2020, December 22). Congress Acts To Spare Consumers From Costly Surprise Medical Bills. NPR. <https://www.npr.org/sections/health-shots/2020/12/22/949047358/congress-acts-to-spare-consumers-from-costly-surprise-medical-bills>

equity. Simply put, private equity has become a force in healthcare investing and all indications are that its influence on the sector will continue to grow.

IV. PRIVATE EQUITY IN PRACTICE: FOUR CASE STUDIES OF PRIVATE EQUITY INVESTMENTS IN HEALTHCARE

One cannot understand private equity investing by looking only at top-line statistics. Each private equity investment takes its own unique form, as no two investors and no two portfolio companies are strictly identical. Private equity investors are nothing if not opportunistic, and each investment is designed to exploit the opportunities presented by the particular business or market in which the investment is made. To provide some flavor of how this plays out in the healthcare space, we proceed by a detailed examination of four case studies designed to illustrate various iterations of the private equity investment model.

We elected to include companies in hospital and outpatient services markets as these are the two most common settings for care delivery, and as private equity reshapes major players in these markets, the potential implications for healthcare delivery in the US are significant. We also included a case in long term care, due to private equity's active and long-standing presence in this sector. Within long term care, we elected to present a case study on home health, as private equity's activity nursing homes is relatively well documented²⁶, and home health appears to be an emerging interest for private equity investors. Finally, we included a pharmaceutical company due to competitive concerns in these markets. While each of these case studies has unique features, through their collective examination, we also observe several themes that recur over and over again in companies touched by private equity. Those themes and their implications are discussed in Section V.

CASE STUDY: JORDAN HEALTH SERVICES

HOME-HEALTHCARE

Private equity expansion into home health represents the growing trend of placing investments in profitable healthcare sectors. Private equity has long targeted nursing homes, which provide similar services to home health, and private equity now owns an estimated 10 percent of nursing homes in the US. We selected home-health because private equity investment in home health reached an all-time high in 2019 and carried over in 2020, indicating a growing trend of private equity investment²⁷ in this sector. Additionally, home health firms have been purchased by private equity firms at a "bargain" based on their potential value, which then increases opportunities to maximize returns on money invested, making home health an appealing investment for private equity firms.

BACKGROUND. Formerly known as Northeast Texas Health Services, Jordan Health Services was founded in 1975 in Texas and functions as a healthcare provider offering in-home care including skilled nursing, therapy, personal care, and hospice services. Prior to its merger into Elara Caring,

²⁶ Gupta, A., Howell, S. T., Yannelis, C., & Gupta, A. (2021, February). *Does Private Equity Investment in Healthcare Benefit Patients? Evidence from Nursing Homes* (No. w28474). National Bureau of Economic Research. <https://doi.org/10.3386/w28474>

²⁷ Humphreys, A. (2020, February 20). *What will private equity investment in healthcare look like in 2020?* MedCity News. <https://medcitynews.com/2020/02/what-will-private-equity-investment-in-healthcare-look-like-in-2020/>

Jordan Health Services served over 39,000 patients daily across Texas, Oklahoma, Louisiana, Arkansas, and Missouri primarily through home health, hospice, and community care. The organization currently serves an estimated 65,000 patients.

EARLY M&A ACTIVITY. Between March 30, 2007 and April 1, 2008, Jordan Health Services acquired four regional firms, purchasing middle-market companies that provide similar services such as home care, hospice, and personal care in the southwestern Texas area. The companies were acquired as add-ons via Jordan Health Services' financial sponsor Trinity Hunt Partners, a Dallas-based private equity firm focused on accelerating the growth of healthcare companies.

ACQUISITION BY PALLADIUM EQUITY PARTNERS. Jordan Health Services was acquired by Palladium Equity Partners through a leveraged buyout on December 27, 2010 for an undisclosed amount. Based in New York City, Palladium Equity Partners is a private equity firm that seeks to invest in lower middle-market companies operating in consumer, service, industrial, and healthcare sectors.

Following the acquisition, Jordan Health Services became a portfolio company of Palladium, combining operations with Great Lakes Caring and National Home Healthcare to create one of the nation's largest home-based care providers.

STRATEGY OF PALLADIUM EQUITY.

Under Palladium's ownership and financial backing, Jordan Health Services completed 29 acquisitions and established itself as one of the leading regional home health companies in the U.S.²⁸

Following the purchase of Jordan Health Services, Palladium Equity purchased firms throughout Texas, even expanding to Louisiana, Oklahoma, and Missouri resulting in a considerable hold in the Midwest until Jordan Health Services was later acquired in 2018.

During Palladium's ownership of Jordan Health Services, Palladium implemented key elements of its GOL™ value creation framework, which involves accelerating growth through strategic planning,

December 2010: Palladium Equity Partners acquires Jordan Health Services

- CIT Group, F&M Bank, and Trust and Ally Corporate Financing provides senior debt financing
- Prospect Capital provides \$15.31 million of secured debt financing
- GMAC Health Capital provides a revolving credit facility
- W Capital Partners participates in round

2010-2018: Jordan Health Services acquires 29 companies

- Trinity Hunt Partners invests about \$16 million to support the purchase of Chartwell Home Care

May 2018: Kelso & Company and Blue Wolf Capital Partners acquires Jordan Health Services, merging the company with two other home health organizations

- Kelso & Company and Blue Wolf acquires Jordan Health Services in a \$700 billion leveraged buyout
- Financial sponsors include Blue Wolf, Constitution Capital Partners and Kelso Private Equity
- Jeffries Finance and Golub Capital provide \$1.035 billion of debt financing

²⁸ Pitchbook. (n.d.). Jordan Health Services. <https://my.pitchbook.com/profile/12072-97/company/profile#investments>

mergers and acquisitions, and organic initiatives, improving operations through financing and budgeting, operational improvements and systems and reporting, and enhancing leadership.²⁹ Palladium was involved in the recruitment of senior team members and the development of an in-house M&A team, supporting the company's investment in corporate infrastructure, diversification into new business lines, and facilitating over 30 acquisitions. Jordan's related organic growth initiatives and its M&A program were credited with helping to expand the company's service offerings, allowing Jordan Health Services to achieve geographic scale and lead the consolidation in its markets.

The costs of Jordan Health Services' add-ons during Palladium's ownership period were undisclosed. Ultimately, given the limited information of the cost of add-ons, the financial scale of Jordan Health Services' add-ons cannot be fully determined.

ACQUISITION BY KELSO & COMPANY AND BLUE WOLF CAPITAL PARTNERS. About eight years after Palladium's acquisition, on May 15, 2018, Jordan Health Services was acquired by Kelso & Company and Blue Wolf Capital Partners ("Blue Wolf") in a \$700 billion leveraged buyout and merged with National Home Health Care and Great Lakes Home Health Services, which were both backed and acquired by Blue Wolf in 2016.

Kelso & Company is a North American-focused middle-market private equity firm that has invested more than \$12 billion of equity in over 120 companies in the 38 years since its founding. Blue Wolf Capital is a private equity firm specializing in control investments in middle-market companies with more than \$1.2 billion currently under its management.

The merger of Jordan Health Services, National Home Health, and Great Lakes Home Health Services formed Elara Caring, one of the nation's largest providers of home-based care, merging three regional market leaders and creating a comprehensive continuum of personal care, skilled home health, and hospice care.³⁰ Elara Caring serves over 65,000 patients and their families on a daily basis, employing over 35,000 caregivers across 16 states in 225 locations.³¹

STRATEGY OF KELSO & COMPANY AND BLUE WOLF. Under Kelso & Company and Blue Wolf, Elara Caring has not made any investments since the acquisition of Jordan Health Services. There were five investors in Kelso & Company and Blue Wolf's acquisition of Jordan Health Services: Blue Wolf Capital Partners, Constitution Capital Partners, and Kelso Private Equity, which were add-on sponsors, and Elara Caring and Great Lakes Home Health Services, both acquirers. Both Palladium Equity Partners and W Capital Partners exited completely following Kelso & Company and Blue Wolf's entrance.³² Under Kelso & Company and Blue Wolf, data mining has become a larger focus for Jordan Health Services.

²⁹ Value Creation - GOL. Palladium Equity Partners. <https://www.palladiumequity.com/gol/>

³⁰ Elara Caring. (n.d.). Elara Caring - About Us. <https://elara.com/about-us/>

³¹ Mullaney, T. (2018, July 17). Jordan, Great Lakes, National Home Health Rebrand as Elara Caring. Home Health Care News. <https://homehealthcarenews.com/2018/07/jordan-great-lakes-national-home-health-rebrand-as-elara-caring/>

³² Margulies, M. (2018, May 17). Jordan Health Services Has Been Acquired by Kelso & Company and Blue Wolf Capital Partners. Cain Brothers. <https://www.cainbrothers.com/transactions/jordan-health-services-has-been-acquired-by-kelso-company-and-blue-wolf-capital-partners/>

COMPARABLE FIRMS. One notable firm in the same area is AccentCare, a provider of post-acute home healthcare services. AccentCare was first acquired by Oak Hill Capital Partners in December 2010 and it specializes in providing comprehensive care, guidance, and support, including short-term, complex and chronic conditions, allowing independent living for seniors. Prior to the acquisition by Oak Hill Capital Partners, AccentCare completed six buyouts in four states. Since its acquisition by Oak Hill Capital Partners, AccentCare has completed 11 buyouts, primarily in Texas. AccentCare was recently acquired by Advent International in May 2019 for an undisclosed sum and since completed two buyouts. Following Advent International’s acquisition, AccentCare and Seasons Hospice merged in December 2020, combining operations to employ an estimated 30,000 workers and to serve approximately 175,000 patients from 225 locations across 26 states.³³

CASE STUDY: ARDENT HEALTH SERVICES

INPATIENT SERVICES

Hospitals have undergone tremendous consolidation over the last several decades, fueled in part by private equity investments. We chose Ardent Health Services to study because the M&A strategy employed at Ardent is a good example of private equity firms’ ability to rapidly consolidate and generate revenue, while simultaneously loading the portfolio company with an enormous amount of debt. Such debt can lead to the closure of hospitals and clinics. The Ardent case study is provided to underscore the financial decisions private equity firms make that feed consolidation and can lead to financially unstable hospitals.

BACKGROUND. Ardent Health Services, formerly Behavioral Health Corporation, is a private for-profit health system founded in 1993 in Nashville, Tennessee.³⁴ At its start, Ardent’s primary focus was on behavioral health facilities and psychiatric hospitals. Today, Ardent runs acute-care hospitals and clinics in growing urban areas. Through a series of mergers and acquisitions under private equity backing, Ardent now owns and operates 30 hospitals with about 26,000 employees, generating just over \$4.4 billion in annual revenue.³⁵ Ardent’s impressive growth, however, has been funded by taking on large amounts of debt that may threaten the viability of the company.

ACQUISITION BY WCAS. In 1993, Behavioral Health Corporation (BHC) received an undisclosed amount of development capital from a leading New York-based private equity firm, Welsh, Carson, Anderson, and Stowe (WCAS).³⁶ In July 2001, WCAS acquired BHC for \$145 million from Kindred Healthcare, a company that specializes in nursing and rehabilitation centers, and long-term acute care hospitals.³⁷ WCAS intended to shift BHC’s focus onto the acute care hospital industry and give it a new name — Ardent Health Services.³⁸ Shortly after acquiring BHC in 2001,

³³ Parker, J. (2020, December 22). AccentCare, Seasons Hospice Complete Merger. Hospice News. <https://hospicenews.com/2020/12/22/accentcare-seasons-hospice-complete-merger/>

³⁴ Ardent Health Services. (2016, October 5). *Ardent Health Services And LHP Hospital Group, Inc. Announce Plans To Merge*. <https://ardenthealth.com/ardent-health-services-and-lhp-hospital-group-inc-announce-plans-merge>

³⁵ Welsh, Carson, Anderson & Stowe. (n.d.). History. Retrieved March 26, 2021, from <https://www.wcas.com/firm/history>

³⁶ PitchBook. (n.d.). Ardent Health Services Profile. PitchBook. Retrieved February 12, 2021 from <https://www.pitchbook.com>

³⁷ Ibid.

³⁸ Cate, M. (2001, July 8). Welsh Carson puts \$145 million into venture. Nashville Business Journal. <https://www.bizjournals.com/nashville/stories/2001/07/09/story7.html>

WCAS sold 24 percent equity in Ardent to Ferrer Freeman & Company, RFE Investment Partners, and Ridgemont Equity Partners for \$2 million.³⁹

WCAS focuses exclusively on the healthcare and technology sectors.⁴⁰ Over the course of four decades, the firm has raised over \$27 billion in capital across 16 partnerships and over 190 portfolio companies.⁴¹ WCAS has made 90 investments in the healthcare industry in sub-sectors including healthcare providers, specialty facilities, payor services, and healthcare information technology.⁴² According to WCAS, it partners with strong management to acquire growing companies and drives value through operating improvements as well as strategic M&A growth initiatives.⁴³

STRATEGY OF WCAS. Under WCAS' ownership of Ardent, WCAS focused on strategic acquisitions. From 2001 to 2005, Ardent acquired nine healthcare organizations; primarily small hospitals and clinics in the Southeast and Southwest.⁴⁴ Ardent invested large sums of money to build emergency rooms, consolidate facilities, and focus on providing specialized services. During this period, Ardent also received \$2 million of development capital from Clayton Associates in 2001 and \$4.58 million of development capital from Peloton Equity in 2003. Ardent also took on an undisclosed amount of debt in the form of a loan.⁴⁵

July 2001: WCAS acquires Behavioral Health Corporation

2001-2005: Ardent acquires nine healthcare organizations, invests in building ERs, and consolidates facilities.

2005: Ardent sells 20 inpatient psychiatric facilities to Psychiatric Solutions

2005-2013: Ardent acquires three companies

2015: Ventas acquires Ardent from WCAS. Ventas separates hospital and real estate operations and sells 90.1% of hospital operations to EGI.

2017: Ardent acquires LHP Hospital Group and forms joint venture partnerships with University of Kansas Health System and East Texas Medical Center to acquire additional hospitals

- WCAS acquires BHC for \$145 from Kindred Healthcare
- WCAS sells 24% equity in Ardent to Ferrer Freeman & Company, RFE Investment Partners, and Ridgemont Equity Partners for \$2 million
- Ardent receives \$2 million of development capital from Clayton Associates and \$4.58 million from Peloton Equity
- Ardent sells 20 psychiatric facilities for \$560 million
- Ardent completes a \$475 million dividend recapitalization
- FS Investment, Bank of America Merrill Lynch, Barclays Investment Bank, and GE Capital provided \$395 million in loan, \$75 million in revolving line of credit, and \$5 million of senior debt
- Bank of America Merrill Lynch and Barclays lead a \$1.02 billion debt refinancing round used to refinance Ardent's existing senior secured credit facilities
- Ardent receives \$20 million of debt financing in the form of a second lien secured debt from Apollo Investment
- WCAS sells Ardent to Ventas in a \$1.75 billion deal, supported by a \$250 million first lien provided by Benefit Street Partners
- Ventas sells 90.1% of hospital operations to Equity Group Investments
- Ardent acquires LHP Hospital Group, funded by \$700 million in secured debt financing from Ventas
- Ardent receives \$300 million of debt financing in the form of a loan from Barclays Bank and Jefferies Finance and another \$1.63 million in debt from OFS Capital
- Ardent fails to go public on the NYSE in January 2018 for an offering amount of \$100 million

³⁹ Pitchbook.

⁴⁰ Welsh, Carson, Anderson & Stowe. (n.d.). Healthcare. <https://www.wcas.com/healthcare>

⁴¹ Welsh, Carson, Anderson & Stowe. History.

⁴² Welsh, Carson, Anderson & Stowe. (2019, July 30). News Detail. <https://www.wcas.com/firm/news/welsh-carson-anderson-stowe-raises-43-billion-in-oversubscribed-thirteenth-private-equity-fund>

⁴³ Ibid.

⁴⁴ Pitchbook.

⁴⁵ Ibid.

In 2005, Ardent shifted further from behavioral health facilities, selling 20 inpatient psychiatric facilities to Psychiatric Solutions for \$560 million to focus on acute care. From 2005 to 2013, Ardent made three more acquisitions in Texas and Kansas – hospitals, clinics and rehabilitation centers from East Texas Medical Center Regional Health Care System, clinics from University of Kansas Health System, and acute care hospitals from LHP Hospital Group.⁴⁶

Since Ardent sold its behavioral health facilities in 2005, Ardent has taken on a significant amount of debt and loans. In April 2010, the company completed a \$475 million dividend recapitalization. Investors and banks provided \$395 million in loans, \$75 million in revolving line of credit, and \$5 million of senior debt.⁴⁷ In 2012, Bank of America Merrill Lynch and Barclays led a \$1.02 billion debt refinancing round used to refinance Ardent's existing senior secured credit facilities. Shortly after, in March 2013, the company received \$20 million of debt financing in the form of a second lien secured debt from Apollo Investment.

ACQUISITION BY VENTAS AND EGI. In 2015, WCAS was fortunate enough to find a second buyer for Ardent Health Services, though second buyers have mostly been lacking in the healthcare space. WCAS sold 100 percent of Ardent in a \$1.75 billion deal to Ventas, an S&P 500 company and leading real estate investment trust.⁴⁸ The deal was supported by a \$250 million first lien provided by Benefit Street Partners.⁴⁹ According to Ventas, it partners with healthcare organizations that deliver quality care and have significant market share, proven management teams, and financial strength.⁵⁰ Immediately after closing the deal, Ventas separated Ardent's hospital operations from its real estate by selling its hospital operations to Equity Group Investments (EGI) for \$475 million, while retaining Ardent's real estate.⁵¹ EGI entered into a long-term master lease with Ventas with an initial base rent of \$100 million and Ventas retained 9.9 percent interest in hospital operations.⁵²

Equity Group Investments is a private equity firm that prides itself on offering decades of investment expertise and strategic planning.

STRATEGY OF VENTAS AND EGI. When Ardent was sold to Ventas, there were six sellers/exiters including Ferrer Freeman & Company, Peloton Equity, RFE Investment Partners, Ridgemont Equity Partners, WCAS, and FCA Venture Partners.⁵³ At exit, the company was generating \$2 billion in annual revenue across 14 hospitals in three states: New Mexico, Oklahoma, and Texas.⁵⁴ Under Ventas and EGI's ownership, only three acquisitions were completed – two in Texas and one in Kansas. In March 2017, Ardent acquired LHP Hospital Group for an undisclosed sum, adding five

⁴⁶ Moore, R. (2005, March 11). Psych Solutions buying Ardent behavioral sites. Nashville Business Journal. <https://www.bizjournals.com/nashville/stories/2005/03/07/daily35.html>

⁴⁷ Pitchbook.

⁴⁸ *Ventas to Acquire Ardent Health Services for \$1.75 Billion* (2015, April 6). Business Wire.

<https://www.businesswire.com/news/home/20150406005245/en/Ventas-to-Acquire-Ardent-Health-Services-for-1.75-Billion>

⁴⁹ Pitchbook.

⁵⁰ *Health Systems*. (n.d.). Ventas. Retrieved March 26, 2021, from <https://www.ventasreit.com/our-portfolio/health-systems>

⁵¹ Pitchbook.

⁵² *Ventas and Equity Group Investments Announce Completion of Ardent Transactions*. (2015, April 4). Business Wire.

<https://www.businesswire.com/news/home/20150804006878/en/Ventas-Equity-Group-Investments-Announce-Completion-Ardent>

⁵³ Ibid.

⁵⁴ Equity Group Investments.

hospitals to its portfolio; the transaction was funded through \$700 million in secured debt financing from Ventas.⁵⁵ This deal made Ardent the second largest private for-profit hospital operator in the U.S. and expanded hospitals under Ardent's umbrella to Florida, Idaho, and New Jersey.⁵⁶ Following its deal with LHP, Ardent formed joint venture partnerships with The University of Kansas Health System and East Texas Medical Center to acquire hospitals in Texas and Kansas. Prior to EGI and Ventas' investment, Ardent owned 14 hospitals in three states, generating \$2 billion in revenue. By year-end 2020, Ardent's unique partnership with EGI and Ventas led to the company operating 30 hospitals across six states and generating \$4.4 billion in revenue.⁵⁷

Similar to the period under WCAS ownership, Ardent's acquisitions under Ventas and EGI were made possible by taking on debt. In March 2018, Ardent received \$300 million of debt financing in the form of a loan from Barclays Bank and Jefferies Finance. The company received another \$1.63 billion in debt from OFS Capital before a failed attempt to go public on the New York Stock Exchange in January 2018 for an offering amount of \$100 million.⁵⁸

COMPARABLE FIRMS. Some private equity firms turn to real estate investment trusts, like Ventas, that require hospitals to lease back property. Companies like Community Health Services (CHS), Steward, and Iasis have gone to similar extremes to pay off mounting debt and provide investor returns.⁵⁹ CHS followed the typical private equity business model of growing through add-ons and continued to take on increasing amounts of debt to finance leveraged buyouts. Ultimately, however, CHS could not meet its debt obligations, causing the company to begin divesting facilities and leaving communities with the threat of scarce access to care.⁶⁰

In addition to entering sale-leaseback agreements, companies try to exit investments through an IPO. Iasis was one such company, whose proposed public offering failed because of junk bonds.⁶¹ Ardent's IPO withdrawal may also be due to high-risk bonds. At the time of the initial offering in 2018, Moody's Investors Service assigned a Caa2 rating to \$535 million of eight-year senior unsecured notes offered by Ardent.⁶² The Caa2 rating is indicative of low-quality notes that carry significant credit risk. In addition, a B3 and B1 rating, indications of speculative and high-risk characteristics, were assigned to Ardent for its \$765 million senior secured term loan.⁶³

⁵⁵ Pitchbook.

⁵⁶ Ardent Health Services. (2016, October 5). Ardent Health Services And LHP Hospital Group, Inc. Announce Plans To Merge. <https://ardenthealth.com/ardent-health-services-and-lhp-hospital-group-inc-announce-plans-merge>

⁵⁷ Ibid.; Equity Group Investments.

⁵⁸ Pitchbook.

⁵⁹ Appelbaum, E., & Batt, R. (2020). *Private Equity Buyouts in Healthcare: Who Wins, Who Loses?* Institute for New Economic Thinking Working Paper Series, 1–115. <https://doi.org/10.36687/inetwp118>

⁶⁰ Ibid.

⁶¹ Ibid.

⁶² Moody's Investors Service. (2018, June 8). Rating Action: Moody's assigns Caa2 to AHP Health Partners notes offering, existing ratings. affirmed. [https://www.moody's.com/research/Moodys-assigns-Caa2-to-AHP-Health-Partners-notes-offering-existing-PR_384986#:~:text=New%20York%2C%20June%2008%2C%202018,Partners%2C%20LLC%20\(Ardent\)](https://www.moody's.com/research/Moodys-assigns-Caa2-to-AHP-Health-Partners-notes-offering-existing-PR_384986#:~:text=New%20York%2C%20June%2008%2C%202018,Partners%2C%20LLC%20(Ardent)).

⁶³ Ibid.

CASE STUDY: PAR PHARMACEUTICALS COMPANIES

PHARMACEUTICALS

Pharmaceutical development is a slow process with a high risk of failure, making the pharmaceutical industry traditionally more attractive to venture capital investors than private equity firms seeking reliable, short term returns. That said, private equity companies have shown increasing interest in the pharmaceutical space, and particularly in buying and consolidating drugs already on the market. According to Bain, “[d]rivers for biopharma services investment [by private equity] include ... the opportunity to participate in the biopharma sector while evading pricing pressures on drugs.”⁶⁴

Par makes an interesting case study for two reasons. First, it provides an example of private equity mergers and acquisitions growth strategy applied to the pharmaceutical industry, as TPG Capital and AlInvest Partners grew Par into a major player in the generic market by rapidly acquiring other manufacturers over a span of three years. Second, Par has engaged in anticompetitive behavior on multiple occasions, demonstrating how private equity-backed consolidation might threaten market competitiveness in an industry already reaching concerning levels of concentration.

BACKGROUND. Par Pharmaceuticals Companies, which was founded in 1978, operates as a manufacturer and distributor of generic and branded pharmaceuticals in the United States. Par Pharmaceuticals (PRX) began trading on the NYSE in 1987, after raising \$150 million in its initial public offering. As of 2016, Par’s sales placed the company among the top four largest generic pharmaceutical companies in the United States.⁶⁵

ACQUISITION BY TPG CAPITAL AND ALPINVEST PARTNERS. In late 2012, two private-equity backed companies, TPG Capital and AlInvest Partners, acquired Par through a \$1.9 billion leveraged buyout.

Headquartered in San Francisco and Fort Worth, TPG is a global investment firm that manages about \$85 billion in assets, of which \$11.5 billion are invested in healthcare. TPG currently holds 13 active companies and has fully realized 11 companies through IPOs, recapitalization, or mergers and acquisitions; six of those fully realized investments were in pharmaceuticals and biotechnology.⁶⁶

AlInvest has operated as a subsidiary of The Carlyle Group since 2011 and has more than \$49 billion of assets under management and more than 400 investors, making the company among the largest private equity investors. Ahead of its acquisition by Carlyle, AlInvest was the private investment house for Europe’s two largest pension plans. More recently, the firm has raised a \$6.5 billion secondaries program and a \$3 billion co-investment program.⁶⁷

⁶⁴ Miller, J. (2020, July 9). *Private Equity’s Growing Role in the Biopharma Industry*. DCAT. <https://www.dcatvci.org/6568-private-equity-s-growing-role-in-the-biopharma-industry>

⁶⁵ *Par Pharmaceutical*. (n.d.) Pharmacy Times. <https://www.pharmacytimes.com/view/par-pharmaceutical>

⁶⁶ *Ibid.*

⁶⁷ AlInvest. (n.d.). About us. Retrieved March 24, 2021, from <https://www.alinvest.com/about-us>

STRATEGY OF TPG CAPITAL AND ALP INVEST PARTNERS.

TPG Capital and AlInvest utilized a strategy of increasing scale and diversifying the business to build and grow Par Pharmaceuticals, making four deals in three years.

The first deal was in October 2012. Under TPG Capital and AlInvest's ownership, Par acquired 14 generic drug components from Watson Pharmaceuticals and Actavis Group through a leveraged buyout for an undisclosed sum. The acquired drug components consisted of five generic products that were already

Abbreviated New Drug Applications waiting approval, and a generic product in late-stage development.⁶⁸ Watson had been required by the FTC to divest the drugs in order to obtain clearance by the antitrust agency for its purchase of Actavis.⁶⁹ The deal expanded and further diversified Par's presence in generic drugs. Watson acquired Actavis and adopted the name,⁷⁰ while Par continued to expand with TPG Capital and AlInvest.

About a year and a half later, in March 2014, Par acquired JHP Pharmaceuticals via TPG Capital from Warburg Pincus, another private equity company, through a \$490 million leveraged buyout.⁷¹ JHP Pharmaceuticals, which is headquartered in New Jersey, is a sterile injectable products manufacturer whose manufacturing facility is located in Michigan.⁷² Sterile injectable products include generic and branded pharmaceuticals that are administered through injections, such as JHP's Aplisol® and Adrenalin®. At the time of acquisition, JHP marketed 14 specialty injectable products and had submitted 17 products for FDA approval.⁷³ While Par has had many solid oral dosage products, acquiring JHP diversified Par's portfolio in the growing market for

September 2012: Acquisition by TPG Capital and AlInvest Partners

October 2012: Par acquires 14 generic drug components from Watson Pharmaceuticals and Actavis Group

March 2014: Par acquires JHP Pharmaceuticals from Warburg Pincus

January 2015: Par acquires Innoteq

January 2015: Par acquires Ethics Bio Lab

September 2015: Endo Pharmaceuticals acquires Par from TPG Capital and AlInvest Partners

- TPG Capital and AlInvest Partners acquire Par through a \$1.9 billion leveraged buyout

- Par acquires JHP through a \$490 million leveraged buyout

- Par acquires Innoteq through a \$26.4 million leveraged buyout

- Par acquires Ethics Bio Lab through a \$20 million leveraged buyout

- Endo acquires Par from TPG and AlInvest in a transaction valued at \$8.05 billion

⁶⁸ Staff.. (2012, November 14). *Par to Acquire 14 Generics*. U.S. Pharmacist. <https://www.uspharmacist.com/article/par-to-acquire-14-generics>

⁶⁹ Flaherty, S. (2012, October 16). *Watson Gets FTC Nod For \$5.5B Actavis Buy, With Concessions*. Law 360. <https://www.law360.com/articles/386831/watson-gets-ftc-nod-for-5-5b-actavis-buy-with-concessions>

⁷⁰ In 2013, in a groundbreaking decision against Actavis, the Supreme Court held for the first time that pay-for-delay settlements violate the antitrust laws. Actavis merged with Allergan Inc. in 2014, and the combined company sold its generics business to Teva later that year. (Law360 10-24-18).

⁷¹ Pitchbook. Kiernan, K. (2014, May 12). *Rising Star: Willkie Farr's Robert Langdon*. Law 360.

⁷² Pitchbook.

⁷³ Par Pharmaceutical Companies. (2014, January 21). *Par Pharmaceutical to Acquire JHP Pharmaceuticals*. PR Newswire. <https://www.prnewswire.com/news-releases/par-pharmaceutical-to-acquire-jhp-pharmaceuticals-241264801.html>

injectables.⁷⁴ Of Par's deals with known values, Par's acquisition of JHP would become the largest the company made during the period under TPG and AlInvest.

In January 2015, Par acquired a third company, Innoteq, via TPG Capital and AlInvest Partners through a \$26.4 million leveraged buyout. Headquartered in Stratford, CT, the company manufactures innovative coated products, functioning as an industrial supplier. Innoteq offers a range of services that include casting, packaging, coating, and prototype development.

Par's final deal under TPG and AlInvest occurred just days later in January 2015. Par acquired Ethics Bio Lab via TPG Capital, TPG Biotech and AlInvest Partners through a \$20 million leveraged buyout. Headquartered in Chennai, India, Ethics Bio Lab provides contract research organization services to the pharmaceutical and biotechnology industries.

The deals made by Par during the TPG and AlInvest ownership period ranged from \$20 to \$490 million, although the price paid for the 14 generic drug components from Watson and Actavis was not disclosed. The acquisitions with a known value total \$536.4 million. The investor group led by TPG was reported to have invested \$738.8 million equity in the acquisition and expansion of Par, based on SEC filings. Ahead of Endo International's acquisition of Par Pharmaceutical Holdings Inc. in 2015, TPG Capital was reported to make about 7.5 times its money with the sale of the company.⁷⁵

ACQUISITION BY ENDO PHARMACEUTICALS. TPG and AlInvest sold Par to Endo Pharmaceuticals in September 2015 in a transaction valued at \$8.05 billion.⁷⁶ Endo's acquisition of Par merged Par's business with Endo's Qualitest, expanding the generics business.⁷⁷ The deal created a company with one of the industry's fastest growing generic businesses and placed the company in the top five largest pharmaceutical companies in the U.S. as measured by U.S. sales.⁷⁸

Endo, which acquired Par in 2015, has frequently been called out in recent years for its anticompetitive behavior, largely in relation to pay-for-delay agreements — which typically involve a patent holder paying a generic manufacturer to delay entry to the market — but also for anticompetitive abuse of FDA processes. In 2017, the Federal Trade Commission refiled a complaint and a proposed stipulated order in federal court to resolve charges that the company used pay-for-delay settlements to protect the share and prices of its top-selling branded products, a topical pain relief patch and an extended-release opioid used for pain relief. Such settlements violate antitrust laws by interfering with consumers' access to more affordable, generic versions of Endo's brand name drugs as the settlements keep competitors out of the market.⁷⁹

⁷⁴ Wasserman, E. (2015, October 6). 19. Par Pharmaceutical. FiercePharma. <https://www.fiercepharma.com/special-report/19-par-pharmaceutical>

⁷⁵ Beltran, L. (2015, May 18). *Par Pharma sale to produce seven-fold return for TPG in less than 3 years*. PE Hub. <https://www.pehub.com/par-pharma-sale-to-produce-seven-fold-return-for-tpg-in-less-than-3-years/>

⁷⁶ Endo International plc.. (2015, September 28). *Endo Completes Acquisition of Par Pharmaceutical and Provides Financial Guidance*. Endo. <https://investor.endo.com/news-releases/news-release-details/endo-completes-acquisition-par-pharmaceutical-and-provides>

⁷⁷ Pharmacy Times.

⁷⁸ Endo International plc. (2015, May 18). *Endo to Acquire Par Pharmaceutical, Strategically Expanding Generics Business to a Top 5 Industry Leader*. Retrieved March 24, 2021, from <https://investor.endo.com/news-releases/news-release-details/endo-acquire-par-pharmaceutical-strategically-expanding-generics>

⁷⁹ *Endo Pharmaceuticals Inc. Agrees to Abandon Anticompetitive Pay-for-Delay Agreements to Settle FTC Charges; FTC Refiles Suits Against Generic Defendants*. (2017, January 23). Federal Trade Commission. <https://www.ftc.gov/news-events/press-releases/2017/01/endo-pharmaceuticals-inc-agrees-abandon-anticompetitive-pay-delay>

Endo also joined two other generic drug makers in paying California a sum of nearly \$70 million to settle a pay-for-delay case led by then-California Attorney General Xavier Becerra. Although Teva⁸⁰ paid the bulk of the settlement, an eight-year-long injunction was imposed on Endo to prevent it from engaging in additional pay-for-delay deals.⁸¹

More recently, the FTC filed a new antitrust complaint in January 2021 involving Endo and Impax Laboratories creating a second pay-for-delay deal that again limited competition in the market for opioid pain medication.⁸² This case and others have highlighted the power pharmaceutical companies have wielded in limiting competition for their products and keeping prices for consumers artificially high.

CASE STUDY: ADVANCED DERMATOLOGY AND COSMETIC SURGERY

OUTPATIENT SERVICES

Figure 3 demonstrates that outpatient services is the number one sector in healthcare for private equity investments by deal count. The strategies used by Advanced Dermatology and Cosmetic Surgery (ADCS) and its private equity ownership to grow a regional dermatology firm into a large national company are now commonplace in the outpatient services sector and throughout healthcare. As an early example of aggressive, private equity-backed growth strategies in the field of dermatology, the case study on ADCS offers insights into how private equity may reshape the outpatient services sector in the near future.

BACKGROUND. Advanced Dermatology and Cosmetic Surgery (ADCS) is a physician practice management firm founded in Florida in 1989. ADCS has grown into the nation's largest dermatology network, with at least 193 locations across 14 states.⁸³ ADCS' rapid growth under private equity management has spurred a wave of consolidation in dermatology and other physician specialties as copycat investors seek to capitalize on for-profit care in outpatient markets.

EARLY GROWTH. Although founded in 1989, ADCS' emergence as the preeminent national dermatology practice management firm only occurred over the past decade. ADCS began expanding rapidly in 2009, acquiring practices in Central Florida and Ohio, targeting areas where referrals to dermatologists had long wait times indicating unmet demand.⁸⁴ To fund these early acquisitions, ADCS took out four loans of undisclosed sums, including one from a dermatology equipment rental company named Laser Leasing. By 2012, ADCS' growth had attracted the attention of private equity, and Audax Group acquired ADCS in October of that year for an undisclosed sum.

⁸⁰ As discussed above, Teva ultimately acquired the generic drug business that had belonged to Actavis and which was the impetus for the original divestiture of Watson's generic drugs to Par before it was purchased by Endo.

⁸¹ Bell, J. (2019, July 29). *Teva, Endo among generics paying \$70M in California pay-for-delay settlement*. BioPharma Dive. <https://www.biopharmadive.com/news/california-generics-settlement-teva-endo-Teikoku-pay-for-delay/559756/>

⁸² *FTC Says Endo, Impax Cut 2nd Opana ER Pay-For-Delay Deal*. (n.d.). Law 360. <https://www.law360.com/articles/1348411/ftc-says-endo-impax-cut-2nd-opana-er-pay-for-delay-deal>

⁸³ Tan S, Seiger K, Renehan P, & Mostaghimi A. (2019, July 24). Trends in Private Equity Acquisition of Dermatology Practices in the United States. *JAMA Dermatology and Cosmetic Surgery*, 155(9):1013–21. doi: 10.1001/jamadermatol.2019.1634. Epub ahead of print. PMID: 31339521; PMCID: PMC6659155

⁸⁴ *Advanced Dermatology*. (2016, September 19). *Advanced Dermatology News Updates & Blog | Dr. Matt Leavitt Profiled in Orlando Business Journal*. <https://www.advancedderm.com/about-us/news/dr-matt-leavitt-profiled-in-orlando-business-journal>

ACQUISITION BY AUDAX GROUP. Audax Group is a Boston-based buyout firm that touts a “buy & build” approach to investing, in which it uses mergers and acquisitions to grow platform investments (“buy & build” is often used interchangeably with the term “roll up”).⁸⁵ ADCS’ size, experience with acquisitions, and retail focus made it an outlier among dermatology practices and a natural target or “platform” (a term often used to describe a large, well-organized, and/or scalable first investment for use in buy and build or roll up strategies) for investment by Audax Group.

Under Audax’ ownership, ADCS pursued an aggressive expansion strategy funded by debt. PitchBook data indicates that ADCS made at least 35 add-on acquisitions while held by Audax. These acquisitions (physician specialty practices are typically acquired for a total in the range of \$1-10 million⁸⁶, depending on the size and value of the practice) required further financing beyond that provided by the original leveraged buyout, and ADCS took out a series of loans while under Audax’ ownership. These loans included \$118 million in debt financing in May 2014, an undisclosed amount in mezzanine financing in February 2015, \$7.5 million in debt financing in September 2015, and another undisclosed sum in debt financing in September 2015. ADCS was recapitalized by Audax Group and Harvest Partners in 2016, with Harvest Partners becoming the primary owner of the company.⁸⁷ While the total deal size was not disclosed, anonymous investors provided at least \$320 million in debt to finance the deal, and Ares Capital Partners contributed another \$24 million.

Through ADCS and other early investments in the industry, Audax has become a top player in healthcare buyouts⁸⁸. Audax has replicated this strategy in other physician specialties, like gastroenterology and women’s health. An example of this would be Gastro Health, a GI practice that Audax has rapidly grown from a South Florida chain into a national firm. Copycat investors have also readily employed the strategies developed by Audax and ADCS in dermatology, urology, GI, and other specialties.

October 2012: Audax Group acquires Advanced Dermatology and Cosmetic Surgery

2012-2016: ADCS acquires at least 35 companies

May 2016: ADCS is recapitalized by Audax Group and Harvest Partners. Harvest becomes the primary owner of the company

2016-present: ADCS acquires at least 12 companies

- ADCS takes on \$118 million in debt financing from NXT Capital, CIT Finance, and GE Capital;
 - First Capital Partners provides an undisclosed amount in mezzanine financing from First Capital Partners
 - Triangle Capital Corporation provides \$7.5 million in debt financing
 - McKesson provides an undisclosed sum in debt financing
 - ADCS acquires practices likely in the range of \$1-10 million
-
- Anonymous investors provided at least \$320 million in debt to finance the deal involving Harvest, and Ares Capital Partners contributed another \$24 million

⁸⁵ Audax Private Equity. Overview. (n.d.). <https://www.audaxprivateequity.com/>

⁸⁶ Coldiron, B. M. (2017, November 17). Well I Figured It Out...I Owe My Soul to the Company Store. MDedge Dermatology.

⁸⁷ Audax Private Equity. (2016, May 18). Harvest Partners and Audax Announce Recapitalization of Advanced Dermatology. <https://www.audaxprivateequity.com/news/harvest-partners-and-audax-announce-recapitalization-of-advanced-dermatology>

⁸⁸ See Table 1.

ADCS UNDER HARVEST CAPITAL PARTNERS OWNERSHIP. The investment thesis for ADCS on Harvest Partners' website notes ADCS' position as the "sole national consolidator" in dermatology, suggesting that Harvest at least initially sought to continue the expansionary strategy pursued by Audax Group.⁸⁹ However, under Harvest Partners' ownership, ADCS' growth has slowed somewhat relative to the breakneck pace achieved under Audax Group. Since the May 2016 buyout, ADCS has made at least 12 acquisitions, but does not appear to have taken on additional debt. In late 2020, ADCS made its first series of acquisitions since late 2017, purchasing dermatology practices in Colorado, Alabama, and Florida.⁹⁰ Although financial details were not disclosed for any of these acquisitions, it should be noted here that many have forecasted an increase in healthcare market consolidation resulting from the COVID-19 pandemic, as smaller physician practices facing pandemic-related financial strain seek acquisition by larger organizations with deeper pockets.⁹¹

Harvest Capital has now held ADCS for five years. Under typical private equity timelines, Harvest Capital will likely be looking to exit ADCS within the next two years, raising the question of what kind of organization will have the finances to acquire such a large organization that has taken on seemingly significant amounts of debt.

V. IMPLICATIONS FROM THE CASE STUDIES

The case studies examined in Section IV illustrate some of the key impacts of private equity in healthcare markets, and we observe several significant threads that run through them. First, the involvement of private equity in healthcare markets drives and amplifies trends toward consolidation. Second, with its short-term investment strategy rooted in "buy and build," private equity rapidly transforms the way these markets are structured, increasing concentration, especially at a local and regional level, and shaping how care is delivered. Third, private equity infuses a tremendous amount of risk into healthcare markets by loading providers with debt and stripping them of assets. Fourth, the private equity model with its aggressive focus on revenue generation poses unique risks to quality of care and places strain on standards of medical ethics.

CONSOLIDATION: THE CURRENT TIDE AND COMING WAVE

The drive to consolidate industries and markets pervades each case study. This consolidation is sometimes driven by data, as in the acquisition of Jordan Health Services by Kelso & Company and Blue Wolf, which was promoted on the basis that consolidating patient data under Elara Caring

⁸⁹ Harvest Partners. (n.d.). Advanced Dermatology & Cosmetic Surgery. <https://www.harvestpartners.com/advanced-dermatology-cosmetic-surgery>

⁹⁰ Advanced Dermatology and Cosmetic Surgery. (2020, December 3). *Advanced Dermatology and Cosmetic Surgery Announces the Acquisition of Colorado Dermatology Specialists*. PR Newswire. <https://www.prnewswire.com/news-releases/advanced-dermatology-and-cosmetic-surgery-announces-the-acquisition-of-colorado-dermatology-specialists-301185267.html>; Advanced Dermatology and Cosmetic Surgery. (2020, October 1). *Advanced Dermatology and Cosmetic Surgery Announces the Acquisition of Dermatology Associates of Montgomery*. PR Newswire. <https://www.prnewswire.com/news-releases/advanced-dermatology-and-cosmetic-surgery-adcs-clinics-announces-the-acquisition-of-dermatology-associates-of-montgomery-301143843.html>; Advanced Dermatology and Cosmetic Surgery. (2020, December 3). *Advanced Dermatology and Cosmetic Surgery Announces the Acquisition of Nielsen Dermatology*. PR Newswire. <https://www.prnewswire.com/news-releases/advanced-dermatology-and-cosmetic-surgery-announces-the-acquisition-of-nielsen-dermatology-301185392.html>

⁹¹ Tollen, L & Keating, E. (2020, August 3). COVID-19, Market Consolidation, And Price Growth. Health Affairs. <https://www.healthaffairs.org/doi/10.1377/hblog20200728.592180/full/>

would translate to better health outcomes by allowing providers to better track trends and predict outcomes. Other providers have utilized similar reasoning to support leveraging patient data as they build a more extensive care continuum and drive consolidation in the healthcare industry.⁹² In other cases, private equity firms justify the acquisitions by economies of scale and claim integrative efficiencies in care, such as when Ardent under WCAS acquired nine healthcare organizations, including three major health systems, in just four years.⁹³ Or, by appeals to the highly fragmented nature of national markets, such as with U.S. Dermatology Partners. Even Par, which began ironically as a vehicle for divesting assets to resolve competition concerns with the Watson-Actavis merger, grew under private-equity ownership to the fourth-largest generic pharmaceutical company in the U.S.

The continually increasing deal counts in Figure 3 (Section III) demonstrate private equity's interest in the outpatient sector. Investment theses and case studies provided by private equity firms in this sector frequently cite the appeal of fragmented markets. Beyond the returns achieved by inflating multiples of add-on practices attached to desirable platform investments, some investors may hypothesize that roll-up or buy-and-build strategies can yield economies of scale on the administrative side or improved bargaining leverage with insurers in price negotiations that can improve profitability. This strategy presents concerning implications for market concentration and competition. Evidence from more concentrated healthcare markets such as hospitals suggests that as investors achieve large returns by consolidating markets, payers generally pay higher prices for care without commensurate improvements in quality, and these prices will likely be passed on to patients and employers in the form of higher premiums and cost-sharing.

There is reason to be skeptical about the claimed benefits that supposedly justify this consolidation. While consolidating data, as in the acquisition of Jordan Health Services, could theoretically allow for greater use of AI and predicting outcomes, such benefits are unproven.⁹⁴ Moreover, as we have learned in technology markets, where customer data has volume-based benefits, it may also produce network effects that can exacerbate trends toward consolidation and lead to tipping markets in favor of a few large players. And, the control of large amounts of patient data also gives the provider significant control over referrals. On the other hand, if the benefits from data mining in these markets are overstated, it undermines one of the primary justifications for economies of scale and benefits from consolidation. Other claims of efficiencies from economies of scale or integrated care are also rarely supported by hard evidence. The studies that have been done to date suggest these supposed efficiencies often fail to materialize at all.⁹⁵

⁹² Mullaney, T. (2018, April 10). Great Lakes, Jordan, National Home Health Merge to Create Powerhouse Provider. Home Health Care News. <https://homehealthcarenews.com/2018/04/great-lakes-jordan-national-home-health-merge-to-create-powerhouse-provider/>

⁹³ Pitchbook.

⁹⁴ Ginsburg, P.B., de Loera-Brust, A., Brandt, C., & Durak, A. (2018, November 1). The Opportunities and Challenges of Data Analytics in Health Care. Brookings. <https://www.brookings.edu/research/the-opportunities-and-challenges-of-data-analytics-in-health-care/>

⁹⁵ Gitterman, D. P., Weiner, B. J., Domino, M. E., McKethan, A. N., & Enthoven, A. C. (2003). The rise and fall of a Kaiser Permanente expansion region. *The Milbank quarterly*, 81(4), 567–601. <https://doi.org/10.1046/j.0887-378x.2003.00295.x>. ("Policy experts theorized, for example, that multispecialty groups could achieve greater economies of scale than other provider types could, by buying supplies and equipment in volume, spreading out the risk that accompanies capitated payments, gaining access to financial capital at lower interest rates, achieving a prominent brand name in the community, and attracting experienced physician managers. ... Despite these supposed advantages, however, the penetration and performance of prepaid group practice have fallen far short of its key proponents' expectations.")

This recurring theme of consolidation is no coincidence; consolidation is central to the private equity business model. Finance markets are key to understanding the relentless push for consolidation by private equity in healthcare (and elsewhere). In finance, there are types and terms of debt financing that are only made available to companies of a certain size.⁹⁶ Accordingly, in order to access these types of debt financing—critical to the private equity profit model—private equity funds have strong incentives to consolidate healthcare providers regardless of whether that consolidation provides true efficiencies or improves patient care.

Adding to these incentives to consolidate and grow revenue, regardless of the impact on patients or markets, is the fact that finance markets value bigger companies more highly. Bigger companies are typically valued at higher multiples of EBIDTA,⁹⁷ in large part because of the access to debt financing just discussed. Accordingly, if a private equity company can grow a company, by whatever means, it can generally sell the resulting company for a much higher multiplier of EBIDTA, without achieving any efficiencies, operational improvements, increases in quality of care, or improvements of the firm's financial footing. Put differently, acquiring smaller healthcare organizations allows private equity firms to exploit arbitrage opportunities. PE firms can acquire small practices for 2 to 4 times EBITDA, merge with larger practices, and sell for 8 to 12 times EBITDA.⁹⁸

While many private equity investments occur in fragmented markets, the Par case highlights additional consolidation issues that arise where private equity becomes involved in markets already suffering from a lack of effective competition. The pharmaceutical industry has long been plagued by concentrative mergers that have gone largely unchecked by antitrust authorities.⁹⁹ For the last two decades, antitrust enforcement in pharmaceutical mergers has focused on divestitures. But, as AAI and others have documented, the highly-concentrated nature of the industry and the presence of multiple serial acquirers, means that divestiture remedies are largely ineffective. The pool of companies is simply too small with too many repeat players to provide an effective check on merged parties, and the divestiture buyers are often subsequently acquired themselves.¹⁰⁰ As the divestiture of Watson's assets to Par demonstrates, divestiture to private-equity-owned entities is no more effective.

The presence of private equity in the history of Par is not entirely unique in the pharmaceutical industry. Often relatively short-term, private equity involvement has commonly involved consolidation to build and increase the value of the companies firms hold, without significant innovation or efficiencies. Bain recently made the revealing statement that "Drivers for [private

⁹⁶ Strebulaev, I. A., & Kurshev, A. (2006, March). Firm Size and Capital Structure. EFA 2005 Moscow Meetings. <https://doi.org/10.2139/ssrn.676106>. ("[L]arger firms are more likely to diversify their financing sources."); Bose, U., MacDonald, R., & Tsoukas, S. (2019). Policy initiatives and firms' access to external finance: Evidence from a panel of emerging Asian economies. *Journal of Corporate Finance*, 59, 162–184. <https://doi.org/10.1016/j.jcorpfin.2016.09.008> ("Larger firms have better access to external finance as they are less financially constrained, while smaller firms are more dependent on short-term bank financing.")

⁹⁷ Bailey, J. (2003, February 25). Why It May Pay to Buy Before Selling the Firm. *WSJ*. <https://www.wsj.com/articles/SB1046114229349870943>

⁹⁸ Casalino, L. P., Saiani, R., Bhidya, S., Khullar, D., & O'Donnell, E. (2019, January 15). Private Equity Acquisition of Physician Practices. *Annals of Internal Medicine*, 170(2), 114–115. <https://doi.org/10.7326/M18-2363>

⁹⁹ Moss, D. L. (2020, September 3). pp. 1–21, From Competition to Conspiracy: Assessing the Federal Trade Commission's Merger Policy in the Pharmaceutical Sector. See also, Diana L. Moss, What Does Expanding Horizontal Control Mean for Antitrust Enforcement? A Look at Mergers, Partial Ownership, and Joint Ventures [White Paper]. American Antitrust Institute (Nov. 4, 2020), https://www.antitrustinstitute.org/wp-content/uploads/2020/11/Moss_Horizontal-Control_11.4.20.pdf.

¹⁰⁰ Moss, supra n.99.

equity investment in] biopharma services investment include ... the opportunity to participate in the biopharma sector while evading pricing pressures on drugs.”¹⁰¹

Private equity’s primary strategy in pharma, as illustrated by the Par case, is to consolidate existing drugs under a single company and then re-sell the company in short order to a long-term market participant.¹⁰² Such a strategy gives the appearance of providing competition but, in reality, serves only to perpetuate, accelerate, and amplify extant concentrative trends. Recent merger remedy guidelines from the DOJ suggest that private equity is a preferred buyer in divestitures because of private equity’s “flexibility in investment strategy.”¹⁰³ While flexible financing may present some short-term competitive benefits to private equity as a divestiture buyer, beyond the very near term, the private equity model makes these companies uniquely ill-suited as effective vehicles for combatting concentration or restoring competition. Accordingly, the DOJ remedy guidance is mistaken and should be withdrawn. Far more promising is the FTC’s recent announcement that it will be launching a multilateral working group to “update their approach to analyzing the effects of pharmaceutical mergers” and explore “fresh approaches.”¹⁰⁴ That group is strongly encouraged to reconsider the role of private equity in pharma and particularly its impact on concentration and its value as a divestiture partner.

Preventing the over-consolidation that characterizes much of the healthcare sector should be a priority. As significant as the private-equity-driven consolidation in healthcare has been in the last decade, there are strong reasons to believe an even bigger wave of private-equity-driven consolidation is coming. In home health, where Elara Caring has grown so swiftly, the expected payment overhaul that will occur with the end of pandemic-aid programs that may force small and medium-sized home health agencies out of the market. Due to the COVID-19 pandemic, these home health agencies have recently relied on government assistance through funding from the CARES Act and loans provided by the Paycheck Protection Program (PPP). However, once government assistance dries up, we expect to see the largest home health providers acquiring these smaller home health agencies, resulting in further consolidation. This expiration of government assistance will coincide with increased pressure on private equity firms to use the dry powder they have accumulated during the COVID market turmoil, and the results may well be explosive.¹⁰⁵

LOCAL DOMINANCE

Another common thread in these case studies is the focus by private equity firms on attaining a dominant presence in local markets or regions. As we discuss in Section VI, healthcare antitrust

¹⁰¹ Miller, J. (2020, June 9). Private Equity’s Growing Role in the Biopharma Industry. ValueChain Insights. <https://www.dcatvci.org/6568-private-equity-s-growing-role-in-the-biopharma-industry>.

¹⁰² Another strategy for private equity firms in pharma has been to buy up older drugs that manufacturers are seeking to move off their balance sheets to free up capital. The private equity firms then combine these carve outs from several manufacturers into a single company, effectively mimicking a large pharmaceutical manufacturer but without the infrastructure or research and development resources. Roumeliotis, G., & Oran, O. (2014, July 11). *Private equity takes on Big Pharma’s carve-out challenge*. Reuters. <https://www.reuters.com/article/us-privateequity-pharmaceuticals-portfolio/private-equity-takes-on-big-pharmas-carve-out-challenge-idUSKBN0FG21G20140711>

¹⁰³ Antitrust Division U.S. Department of Justice. (2020, September). *Merger Remedies Manual*. <https://www.justice.gov/atr/page/file/1312416/download>

¹⁰⁴ Federal Trade Commission. (2021, March 15). FTC Announces Multilateral Working Group to Build a New Approach to Pharmaceutical Mergers. <https://www.ftc.gov/news-events/press-releases/2021/03/ftc-announces-multilateral-working-group-build-new-approach>

¹⁰⁵ Gustafsson, L., & Blumenthal, D. (2021, Mar. 9). *The Pandemic Will Fuel Consolidation in U.S. Health Care*, Harvard Business Review. <https://hbr.org/2021/03/the-pandemic-will-fuel-consolidation-in-u-s-health-care>

markets are generally local, so it is these local market shares that should be the focus of antitrust practitioners. To date, much of the policy attention on private equity has focused on the few areas where private equity firms have obtained significant national market shares—ER physician outsourcing and air ambulances being the two most prominent. These dramatic examples are alarming but are only the tip of the iceberg.

Following the acquisition of Jordan Health Services and subsequent merger to form Elara Caring, Elara Caring became the nation's ninth largest home health provider, holding 1.13% of the national market share in 2019. In 2020, Elara Caring became the nation's eighth largest provider in home health, surpassing Trinity Health at Home.¹⁰⁶ AccentCare (also private-equity-owned) is the fifth largest home healthcare company nationwide, with 1.66% of market share, while Elara Caring holds 1.05% of the national market share, as of 2020 data.

While the combined national market shares of these two companies are much too small to raise significant competition concerns, both companies focused on the same regional markets. Currently, there is no good regional- or local-level market share data available in this industry. This is an informational gap that should be filled. The need for this information is particularly acute because what we do know is that nursing homes owned by private equity firms have higher mortality rates and charge higher prices.¹⁰⁷

Where private equity firms invest in a particular specialty across multiple local markets, there is an additional concern. Take the case of ADCS. ADCS' expansion appears to prioritize acquisitions in dermatology across a broad swath of local geographic markets rather than concentrating its presence within a single geographic market. Consolidation following this pattern may still lead to anticompetitive outcomes. Emerging evidence from hospital markets indicates that acquisitions across geographic markets can still drive price increases,¹⁰⁸ an issue we discuss in greater depth in Section VI.B. Moreover, as private equity continues to grow physician specialty firms regionally and nationally with the expectation of an exit in 3 to 7 years, the compounding effects of copycat investments (such as US Dermatology Partners) and secondary buyouts to other private equity firms that will seek similar returns and growth rates may drive significant concentration across outpatient care even at the national level.

STRIPPING ASSETS AND OVERBURDENING WITH DEBT

Another common theme running through the case studies is the tendency of private equity owners to strip companies of assets and overburden them with debt. By creating dominant yet financially precarious networks of providers, private equity firms put local healthcare markets at further risk of loss of providers and, accordingly, competitors.

¹⁰⁶ Donan, A. (2021, February 9). [Updated] The Top 10 Largest Home Health, Hospice Providers in 2020. Home Health Care News. <https://homehealthcarenews.com/2021/02/the-top-10-largest-home-health-hospice-providers-in-2020/>

¹⁰⁷ Gupta, A., Howell, S. T., Yannelis, C., & Gupta, A. (2021, February). *Does Private Equity Investment in Healthcare Benefit Patients? Evidence from Nursing Homes* (No. w28474). National Bureau of Economic Research. <https://doi.org/10.3386/w28474> (finding private equity ownership of nursing homes increases short-term mortality of Medicare patients by 10% while taxpayer spending per patient episode increases 11%).

¹⁰⁸ Dafny, L., Ho, K., & Lee, R. S. (2019). The price effects of cross-market mergers: Theory and evidence from the hospital industry. *The RAND Journal of Economics*, 50(2), 286–325. <https://doi.org/10.1111/1756-2171.12270>

The aggressive, debt-funded expansion model¹⁰⁹ pursued by ADCS under private equity ownership can lead to financial troubles, as demonstrated by the financial woes of ADCS competitor US Dermatology Partners. In 2016, private equity firm Abry Partners purchased Dermatology Associates of Tyler (now rebranded as US Dermatology Partners) from another private equity group for \$322.5 million, a price roughly 15 times the dermatology firm's earnings before interest, taxes, depreciation and amortization (EBITDA) at the time.¹¹⁰ Dermatology Associates of Tyler was first purchased by private equity in 2013 (a year after Audax bought out ADCS) and had expanded significantly in the intervening years. The high multiple paid by Abry indicates the appeal of the buy-and-build model for private equity investors. As small- to medium-sized dermatology practices can often be purchased for between 5- and 7-times EBITDA,¹¹¹ by adding them to an appealing platform investment, these practices are now eligible to be resold for even higher multiples (such as the 15x paid by Abry) to private equity firms eager to make big deals in hot sectors.¹¹²

This business model can be lucrative in the short run, but the long-term viability of this strategy remains suspect. In 2020, US Dermatology Partners defaulted on \$377 million in financing. While the details of the default and its resolution are difficult to ascertain, lenders in these situations often pursue debt-for-equity swaps (in which a creditor acquires equity in a firm in exchange for assistance with, or forgiveness of, delinquent debts) and in some cases can take control of firms this way. Investors in Golub Capital, one of US Dermatology's creditors, have pressed the firm's CEO on the status of this debt in public earnings calls, citing concerns with multiple quarters in which US Dermatology has not been able to make payments on its loans. During Golub's 2020 Q1 earnings call, Golub CEO David B. Golub responded candidly that Golub had downgraded US Dermatology's credit, and added that, "it's fair to say in my opinion that healthcare rollup strategies are harder to execute than people thought a few years ago."¹¹³ The default of US Dermatology Partners demonstrates the significant risk for target firms involved in aggressive buy and build models.

We see a similar dynamic with Ardent. Ardent's dividend recapitalizations, sale-leaseback agreement, and issuance of junk bonds are indicative of private equity firms' focus on providing investor returns. After a failed IPO, it became clear that Ardent is struggling to pay down its debts. Ardent's debt obligations may eventually overburden the system and cause the firm to start divesting facilities, just as CHS did. Ardent's struggle is perhaps why Lifepoint Inc., owned by private equity firm Apollo Global Management, is in talks to buy Ardent.¹¹⁴ This deal would form an entity worth \$10 billion, creating one of the largest healthcare systems in the country under

¹⁰⁹ See "Acquisition by Audax Group" section for details on debt.

¹¹⁰ Or, A. (2016, May 18). *Abry Partners to Buy Candescant Partners' Dermatology Associates of Tyler for Over \$300 Million*. Wall Street Journal. <https://www.wsj.com/articles/abry-partners-to-buy-candescant-partners-dermatology-associates-of-tyler-for-over-300-million-1463571003>

¹¹¹ Resneck.

¹¹² Butler, K. & Perlberg, H. (2020, January 31). *U.S. Dermatology Defaults on \$377 Million Direct Lender Loan*. Bloomberg. <https://www.bloomberg.com/news/articles/2020-01-31/u-s-dermatology-defaults-on-377-million-direct-lender-loan>

¹¹³ *Golub Capital BDC Inc (GBDC) Q2 2019 Earnings Call Transcript*. (2019, May 9). The Motley Fool.

<https://www.fool.com/earnings/call-transcripts/2019/05/09/golub-capital-bdc-inc-gbdc-q2-2019-earnings-call-t.aspx>; *CGBD Article Preview & Why I Sold*. (2020, February 13). BDC BUZZ. <https://www.bdcbuzz.com/2020/02/13/cgbd-12-7-yield-trading-17-below-book-why-i-sold/>; *Golub Capital BDC Inc (GBDC) Q1 2020 Earnings Call Transcript*. (2020, February 11). The Motley Fool.

<https://www.fool.com/earnings/call-transcripts/2020/02/11/golub-capital-bdc-inc-gbdc-q1-2020-earnings-call-t.aspx>

¹¹⁴ Gottfried, M. & Lombardo, C. (2021, February 11). *Apollo's Lifepoint in Talks to Buy Ardent Health Services*. Wall Street Journal. <https://www.wsj.com/articles/apollo-s-lifepoint-in-talks-to-buy-ardent-health-services-11613061599>

private equity ownership, and suggesting that private equity firms continue to see opportunity in further consolidation of healthcare markets.

It is particularly concerning that Lifepoint's hospitals are in 80 rural markets, as people residing in rural areas are typically underserved in terms of availability and access to healthcare services.¹¹⁵ With the typical private equity model demanding outsized amounts of debt, hospital systems like Lifepoint and Ardent may be overly concerned with investor returns rather than long-term viability of the business or improving quality of care and investing in life-saving technologies.¹¹⁶

Such overburdening with debt is further complicated when, as was the case with Ardent, the private equity fund also strips the healthcare company of its underlying assets, such as through a sale-leaseback of its hospital properties. Separating hospitals and healthcare providers from their underlying real estate interests eliminates an important financial cushion for the providers and places them in a precarious financial position. The most famous example of this risk is Hahnemann Hospital in Pennsylvania. A private equity company bought the struggling hospital in a gentrifying neighborhood in Philadelphia, promptly sold the underlying real estate and loaded the hospital with debt and lease obligations that eventually led to its closure.¹¹⁷ In that case, some question whether the entire structure of the deal was a ploy to engineer the closure of the hospital to free up the valuable real estate for development. Even without such motives, the risk to providers and competition in provider markets remains, and Ardent is a prime example.

AGGRESSIVE FOCUS ON REVENUE GENERATION

A final aspect central to the private-equity business model is evident in these case studies: the aggressive focus of private equity firms on increasing revenue generation in the short term. Dermatologists writing in *JAMA Dermatology*¹¹⁸ and trade publications¹¹⁹ have characterized private equity investments as bringing pressure to employ more physician assistants and refocus their practice towards retail skincare products, in-office dispensing, and self-pay elective procedures. However, retail cosmetic products and self-pay patients were already core aspects of ADCS' practices prior to its acquisition by Audax Group in 2012, as demonstrated by a midlevel provider at an ADCS practice in a 2011 piece in "The Dermatologist."¹²⁰ With private equity financial backing, ADCS has successfully brought this business model to practices across the US.

ADCS's growth and the growth of other private equity-backed dermatology chains may have implications for quality of patient care. In a Bloomberg article from 2020, employees and doctors at ADCS claimed under anonymity that the company had cut back on essential medical supplies provided to its practices in recent years, possibly under pressure by private equity management. ADCS denies these claims.¹²¹ Physicians at ADCS also noted in the Bloomberg piece that they

¹¹⁵ Schuller, K. A., Cronin, C. E., Nicks, S. E., Jing, X., Kingori, C., & Morrone, M. (2019). Development and application of a rubric to compare strategies for improving access to health care in rural communities in the United States. *Evaluation and Program Planning*, 74, 61–68. <https://doi.org/10.1016/j.evalprogplan.2019.02.013>

¹¹⁶ Appelbaum.

¹¹⁷ Ibid.

¹¹⁸ Resneck, J. S., Jr. (2018). Dermatology Practice Consolidation Fueled by Private Equity Investment: Potential Consequences for the Specialty and Patients. *JAMA Dermatology*, 154(1), 13–14. <https://doi.org/10.1001/jamadermatol.2017.5558>

¹¹⁹ Coldiron.

¹²⁰ The Dermatologist. (2011). Product Selection and Dispensing in a New Health Care Era. <https://www.the-dermatologist.com/content/product-selection-and-dispensing-new-health-care-era>

¹²¹ Perlberg, Heather. (2020, May 20). *How Private Equity Is Ruining American Health Care*. Bloomberg. <https://www.bloomberg.com/news/features/2020-05-20/private-equity-is-ruining-health-care-covid-is-making-it-worse>

faced pressure to use in-house labs and rely on biopsies by physician assistants that both led to unnecessary procedures and/or adverse outcomes for patients in some cases. Additionally, ADCS employs a number of specialists in Mohs micrographic surgery. The number of Mohs surgeries performed in the United States has risen dramatically in recent years, and the procedures are often associated with private equity ownership. Some dermatologists have questioned the value and safety of these procedures as performed by private-equity-backed dermatology practices.¹²²

The intense focus of private equity on quickly increasing revenue of physician practices may also lead to an uptick in kickbacks, self-serving referrals, overbilling, and/or aggressive coding of procedures. We have seen some high-profile examples of private-equity-backed physician practices engaging in these behaviors,¹²³ but further study is required to assess whether and to what extent these incidents reflect a broader pattern. The Stark law, the federal Anti-kickback Statute, and the False Claims Act are designed to arrest this type of conduct, but private equity firms have proven adept at finding and exploiting legal loopholes and gray areas. One such area may be the Stark Law's exception for in-office ancillary services. Research is currently underway to better understand the extent to which private equity is building business models around combining physician practices and ancillary services to exploit the in-office exception for certain ancillary services under the Stark law.¹²⁴ The in-office ancillary services exception was intended as a safe harbor for physician practices to be able to make referrals within the practice for diagnostic tests or procedures during the patient's office visit.¹²⁵ If private equity firms are using this safe harbor to construct a profit center, then that will raise serious policy issues.

VI. THE ROAD AHEAD FOR PRIVATE EQUITY IN HEALTHCARE: FUTURE THREATS TO PATIENTS AND MARKETS

As the data and case studies discussed above demonstrate, private equity investment in healthcare has significant implications for quality of care and the nature of healthcare delivery and for competition in healthcare markets. We expand on some of those concerns here.

A. HEALTHCARE QUALITY CONCERNS

Concerns about the quality effects of private equity acquisitions in the healthcare system should be understood in the context of potential benefits of private equity investments. Private equity firms sometimes add value in the middle market through their networks and strategic partnerships,

¹²² Hafner, K. & Palmer, G. (2020, September 22). Skin Cancers Rise, Along With Questionable Treatments. The New York Times. <https://www.nytimes.com/2017/11/20/health/dermatology-skin-cancer.html>

¹²³ Stawicki, Kevin. (2020, February 13). Team Health Can't Dodge FCA Suit Over Nonphysician Billing. Law360; Resneck, J. S., Jr. (2018). Dermatology Practice Consolidation Fueled by Private Equity Investment: Potential Consequences for the Specialty and Patients. JAMA Dermatology, 154(1), 13–14. <https://doi.org/10.1001/jamadermatol.2017.5558>; U.S. Dep't of Justice. (2015, April 21). Family Dermatology PCC Agrees to Pay United States More Than \$3.2 Million to Settle Alleged False Claims Act Violations. <https://www.justice.gov/opa/pr/family-dermatology-pcc-agrees-pay-united-states-more-32-million-settle-alleged-false-claims>

¹²⁴ A collaboration between the USC-Brookings Schaeffer Initiative and Professor Erin Fuse Brown of Georgia State University, and funded by Arnold Ventures, is currently studying these issues and expects to report initial results later in 2021

¹²⁵ Law 360. (2007, July 30). CMS Creates Uncertainty with Proposed Changes. <https://www.law360.com/articles/31025/cms-creates-uncertainty-with-proposed-changes>

industry knowledge, and managerial expertise.¹²⁶ Efficiencies may also exist in private equity consolidation of organizations and private equity could provide the capital that individual physician groups lack, investing in new technologies and innovation to better care and treatment.¹²⁷ Proponents of such involvement argue that private equity investors improve efficiency while cutting costs, bettering the healthcare delivery landscape for patients. Though literature on private equity in healthcare is still an emerging field, the current evidence on these purported improvements is mixed at best.

A recent study by a prestigious group of researchers titled, “Does Private Equity Investment In Healthcare Benefit Patients? Evidence From Nursing Homes” suggests that the answer to the question posed in the title may be “no”.¹²⁸ The study’s most alarming finding is a roughly 10% increase in 90-day mortality for Medicare beneficiaries admitted to PE-owned nursing homes, corresponding to an estimated 20,000 lives lost (about 160,000 years of life with an estimated cost in years of life lost of \$21 billion).

The authors argue that decreases in quality following PE acquisitions of nursing homes may result from attempts to cut down on labor costs. PE ownership was associated with lower frontline nurse staffing--a major component of nursing home operating costs-- and increased use of antipsychotic medications, which can be dangerous in older patients and have been linked to understaffed nursing homes in previous literature.¹²⁹ As quality worsened at PE-owned facilities, so did their financial health. Despite an 11% increase in Medicare spending per stay following PE acquisition, the authors found that acquired nursing homes were struggling with new operating costs imposed by private equity owners, such as “monitoring fees” and lease payments following the sale of their real estate to generate returns for private equity ownership.

The findings of this study echo those of earlier studies such as Pradhan 2014¹³⁰ and Harrington 2012¹³¹, which found reductions in nurse staffing and other measures of care quality associated with private equity ownership of nursing homes. Other studies on the subject have found that PE ownership does not significantly affect quality.¹³² Fewer studies on private equity and quality are available in other sectors such as hospitals and outpatient services.

¹²⁶ Appelbaum, E., & Batt, R. (2014). *Private Equity at Work: When Wall Street Manages Main Street*. Russell Sage Foundation, 139-142.

¹²⁷ Eills, A. (2019, August 16). Private equity’s role in the future of healthcare. *NH Business Review*. <https://www.nhbr.com/private-equitys-role-in-the-future-of-healthcare/>; Humphreys, A. (2020, February 20). What will private equity investment in healthcare look like in 2020? *MedCity News*. <https://medcitynews.com/2020/02/what-will-private-equity-investment-in-healthcare-look-like-in-2020/>; Champagne, D., Davidson, A., Littlejohns, J., & Podpolny, D. (2019, May 23). Private equity opportunities in healthcare tech | McKinsey. <https://www.mckinsey.com/industries/private-equity-and-principal-investors/our-insights/private-equity-opportunities-in-healthcare-tech#> <https://medcitynews.com/2020/02/what-will-private-equity-investment-in-healthcare-look-like-in-2020>

¹²⁸ Gupta, A., Howell, S. T., Yannelis, C., & Gupta, A. (2021). Does Private Equity Investment in Healthcare Benefit Patients? Evidence from Nursing Homes (No. w28474). National Bureau of Economic Research. <https://doi.org/10.3386/w28474>

¹²⁹ Cawley, J., Grabowski, D. C., & Hirth, R. A. (2006). Factor substitution in nursing homes. *Journal of Health Economics*, 25(2), 234–247. <https://doi.org/10.1016/j.jhealeco.2005.06.004>

¹³⁰ Pradhan, R., Weech-Maldonado, R., Harman, J. S., Al-Amin, M., & Hyer, K. (n.d.). Private Equity Ownership of Nursing Homes: Implications for Quality. 14. <https://healthfinancejournal.com/index.php/johcf/article/view/12/15>

¹³¹ Harrington, C., Olney, B., Carrillo, H., & Kang, T. (2012). Nurse Staffing and Deficiencies in the Largest For-Profit Nursing Home Chains and Chains Owned by Private Equity Companies. *Health Serv Res.*, 47(1), 106-128. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3447240/#__ffn__sectitle

¹³² Huang, S. S., & Bowlblis, J. R. (2019). Private equity ownership and nursing home quality: An instrumental variables approach. *International Journal of Health Economics and Management*, 19(3), 273–299. <https://doi.org/10.1007/s10754-018-9254-z>; Bos, A., & Harrington, C. (2017). What Happens to a Nursing Home Chain When Private Equity Takes Over? A Longitudinal Case Study. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*, 54, 1-10.

Recent evidence from the hospital industry paints a less alarming image of private equity investments in healthcare, although concerns remain. A study published in *JAMA Internal Medicine* found that a few process-of-care quality measures used in CMS incentive programs actually improved among private equity-acquired hospitals relative to comparison hospitals.¹³³ The authors also found higher cost-to-charge ratios, a common proxy for hospital prices, and higher profits at hospitals purchased by private equity firms. However, models excluding acquisitions by the private equity-backed Hospital Corporation of America (HCA)—an atypical private equity investment that had decades of experience in hospital mergers and acquisitions prior to being taken private by a group of private equity investors led by Bain Capital Partners in 2006—found that while non-HCA hospitals acquired by private equity were still successful in raising cost-to-charge ratios, there were no quality improvements associated with these other private equity acquisitions. The authors note, additionally, that a significant limitation of the study was that few quality measures and no hospital-level health outcome measures were available. Moreover, another study by the same lead author found that private equity-owned hospitals had lower staff-to-patient ratios and lower patient satisfaction compared to a matched comparison group, although these results were cross-sectional, thus limiting the causal inferences that can be made.¹³⁴

Private equity firms have a large and growing appetite for targets in the outpatient services sector (see Section III, Figure 3), but unlike hospitals and nursing homes, no systematic evidence is yet available on the effects of private equity investments in outpatient services. Research in this area has focused on quantifying the extent of private equity investments, particularly within specialties like optometry/ophthalmology and dermatology.¹³⁵ Many, however, have raised concerns about misalignment of incentives in trade publications and academic journals.¹³⁶ Most recently, a *New England Journal of Medicine* report discussed how there must be recognition of private equity firms' quest for short- to medium-term profits and the pressure such aspirations may place on providers, clinics and practices across the healthcare system.¹³⁷ Similarly, a report by the AMA¹³⁸

<https://doi.org/10.1177/0046958017742761>; Braun, R. T., Yun, H., Casalino, L. P., Myslinski, Z., Kuwonga, F. M., Jung, H.-Y., & Unruh, M. A. (2020). Comparative Performance of Private Equity-Owned US Nursing Homes During the COVID-19 Pandemic. *JAMA Network Open*, 3(10), 1-11. <https://doi.org/10.1001/jamanetworkopen.2020.26702>

¹³³ Bruch, J. D., Gondi, S., & Song, Z. (2020). Changes in Hospital Income, Use, and Quality Associated with Private Equity Acquisition. *JAMA Internal Medicine*, 180(11), 1428-1435. [https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2769549?guestAccessKey=87f981c4-d66d-4901-b869-](https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2769549?guestAccessKey=87f981c4-d66d-4901-b869-43f3489dfb8a&utm_source=For_The_Media&utm_medium=referral&utm_campaign=ftm_links&utm_content=tfi&utm_term=082420)

[43f3489dfb8a&utm_source=For_The_Media&utm_medium=referral&utm_campaign=ftm_links&utm_content=tfi&utm_term=082420](https://doi.org/10.1001/jama.2019.21844)

¹³⁴ Bruch, J., Zeltzer, D., & Song, Z. (2021). Characteristics of Private Equity-Owned Hospitals in 2018. *Annals of Internal Medicine*, 174(2), 277-279. <https://doi.org/10.7326/M20-1361>. See also, Offodile II, A. C., Cerullo, M., Bindal, M., Rauh-Hain, J. A., & Ho, V. (2021, May). Private Equity Investments in Health Care: An Overview Of Hospital And Health System Leveraged Buyouts, 2003-17. *Health Affairs*, 40(5), 719-726. <https://doi.org/10.1377/hlthaff.2020.01535> (finding lower staff ratios in private-equity-acquired hospitals than non-private-equity-acquired hospitals).

¹³⁵ Zhu, J. M., Hua, L. M., & Polsky, D. (2020). Private Equity Acquisitions of Physician Medical Groups Across Specialties, 2013-2016. *JAMA*, 323(7), 663-665. <https://doi.org/10.1001/jama.2019.21844>; Tan S, Seiger K, Renehan P, Mostaghimi A. (2019, July 24).

Trends in Private Equity Acquisition of Dermatology Practices in the United States. *JAMA Dermatology*, 155(9):1013-21. doi: [10.1001/jamadermatol.2019.1634](https://doi.org/10.1001/jamadermatol.2019.1634). <https://doi.org/10.1001/jamadermatol.2019.1634>; Chen, E. M., Cox, J. T., Begaj, T., Armstrong, G. W., Khurana, R. N., & Parikh, R. (2020). Private Equity in Ophthalmology and Optometry: Analysis of Acquisitions from 2012 through 2019 in the United States. *Ophthalmology*, 127(4), 445-455. <https://doi.org/10.1016/j.ophtha.2020.01.007>

¹³⁶ Gondi, S., & Song, Z. (2019, February 28). Potential Implications of Private Equity Investments in Health Care Delivery. *JAMA*, 321(11), 1047. <https://doi.org/10.1001/jama.2019.1077>

¹³⁷ Zhu, J. M., & Polsky, D. (2021, March 18). Private Equity and Physician Medical Practices—Navigating a Changing Ecosystem. *New England Journal of Medicine*, 384(11), 981-983. <https://doi.org/10.1056/NEJMp2032115>

¹³⁸ The American Medical Association. (2019, July). Report of the Council on Medical Service. <https://www.ama-assn.org/system/files/2019-07/a19-cms-report-11.pdf>

discusses potential conflicts of interest due to private equity involvement, namely the conflict in loyalty of the physician to the patient or the employer. Private equity involvement may lead to financial conflicts of interest due to the use of financial incentives in the management of medical care. Physicians provided financial incentives by the private equity firm that may lead to over- or under-treat patients as private equity involvement may pressure physicians to act in the best economic interest of the firm versus the best interests of their patients.

While study of quantitative evidence is needed, incidents reported in the media indicate that private equity's pursuit of profit in the outpatient services sector can put the quality of patient care at risk. As mentioned previously, dermatologists at Advanced Dermatology and Cosmetic Surgery and other PE-backed dermatology groups have raised concerns about understocking of necessary medicines, pressure to refer to in-house labs and surgeons, and use of unsupervised physician assistants.¹³⁹ A 2017 New York Times article presented concerns with the business models of private-equity-backed dermatology groups that employ large numbers of physician assistants in mobile practices that travel to nursing homes and perform minor procedures and biopsies. While the procedures performed can be safe and effective, dermatologists at academic medical centers have questioned whether these procedures—which can cause side effects such as pain, prolonged bleeding and even infection in more than a quarter of patients—are medically necessary in the frail elderly who are very unlikely to live long enough for skin cancers to develop. Review of Medicare claims indicated that skin biopsies and cryosurgeries of precancerous lesions were often performed near the end of patients' lives, and that as many as 75% of patients treated by one private equity backed dermatology group had been diagnosed with Alzheimer's.¹⁴⁰

Private equity investment strategies may also affect quality by driving concentration in healthcare markets. A 2020 paper¹⁴¹ studying dialysis patients found that premerger notification exemptions (meaning exemptions to requirements that merging parties notify regulators when the total value of a merger is under a certain dollar value threshold) result in higher hospitalization rates, lower survival rates, and declines in the number of dialysis machines and nurse staffing. Such findings should be noted when considering the effects of private equity investments, as the “buy and build” or “roll up” strategies employed frequently in the healthcare industry increase market concentration by design.

Much of the behavior of private equity firms and associated health outcomes may not be of great surprise given the core of the private equity investment model: maximize short-term profits for the private equity firm, which typically seeks to make a significant return on its investment within three to five years. Firms often leverage debt financing to raise large sums of capital, leaving the companies with economic pressure that may be addressed ahead of patients' welfare. Research on the quality effects of private equity investment is an urgent need, as current evidence suggests

¹³⁹ Resneck, J. S., Jr. (2018). Dermatology Practice Consolidation Fueled by Private Equity Investment: Potential Consequences for the Specialty and Patients. *JAMA Dermatology*, 154(1), 13–14. <https://doi.org/10.1001/jamadermatol.2017.5558>; Perlberg, H. (2020, May 20). *How Private Equity Is Ruining American Health Care*. Bloomberg. <https://www.bloomberg.com/news/features/2020-05-20/private-equity-is-ruining-health-care-covid-is-making-it-worse>

¹⁴⁰ Hafner, K. & Palmer, G. (2020, September 22). Skin Cancers Rise, Along With Questionable Treatments. *The New York Times*. <https://www.nytimes.com/2017/11/20/health/dermatology-skin-cancer.html>

¹⁴¹ Wollmann, T. G. (2020). *How to Get Away with Merger: Stealth Consolidation and Its Real Effects on US Healthcare* (No. w27274), National Bureau of Economic Research, Inc. <https://doi.org/10.3386/w27274>

that the potential benefits cited by proponents of private equity in healthcare are not being realized.

B. ANTITRUST AND COMPETITION CONCERNS

The increased involvement of private equity firms in healthcare markets raises a number of antitrust and competition issues which merit urgent attention. FTC Commissioner Rohit Chopra has recently raised the alarm about the impact of private equity on competition across all sectors of the economy, stating that he is “concerned about the unreported roll-ups in the healthcare sector” and noted that “[t]hrough these strategies, private equity sponsors can quietly increase market power and reduce competition.” He suggested the Commission should order information on non-reportable healthcare mergers and closely scrutinize HSR filings and possible changes to the HSR Act.¹⁴² The impacts on competition in healthcare from private equity are particularly concerning, given the direct impact on quality of care and patient lives. Many of these concerns are not unique to private equity but are instances where private equity business models amplify and exacerbate existing concerns. But, there are also instances where even in already troubled markets, private equity firms have pioneered new exploitative and anticompetitive practices.¹⁴³

In the healthcare context, increasing concentration and anticompetitive conduct by providers and suppliers leads to decreased quality to potentially ruinous bills to patients, and to increased rates negotiated with insurers which are ultimately passed on to patients and employers in the form of increased premiums, co-pays (where the insured patient pays a flat fee, usually per visit), and co-insurance (where the insured patient pays a percentage of the cost of treatment).¹⁴⁴ Mergers and

¹⁴² Rohit Chopra. (2020, July 8). *Statement of Commissioner Rohit Chopra*. Federal Trade Commission. https://www.ftc.gov/system/files/documents/public_statements/1577783/p110014hsrannualreportchoprastatement.pdf. Cmmr. Christine Wilson also joined Cmmr. Chopra is separately expressing concern about small but cumulatively significant “stealth” acquisitions of health providers and supporting the Commission’s study of this issue under its Section 6(b) powers. Christine Wilson. (2020, Feb. 11). *Statement of Commissioner Christine Wilson, Joined by Commissioner Rohit Chopra*. Federal Trade Commission https://www.ftc.gov/system/files/documents/public_statements/1566385/statement_by_commissioners_wilson_and_chopra_re_hsr_6b.pdf

¹⁴³ One particularly concerning private equity-driven practice we do not discuss in detail is surprise billing. Surprise billing results when a patient goes to an in-network hospital but, unbeknownst to the patient, is tended to by an out-of-network doctor. The patient then receives a large and unanticipated bill for out-of-network services from the doctor, which he or she must pay. See Greaney, T. L. (2020, September 8). *Surprise Billing: A Window into the U.S. Health Care System*. American Bar Association. https://www.americanbar.org/groups/crsj/publications/human_rights_magazine_home/health-matters-in-elections/surprise-billing/. Surprise billing is a tactic that was pioneered by private equity firms that bought up physician practices that contracted with hospitals to provide coverage for their emergency rooms. The two largest physician outsourcing firms in the United States, EmCare and TeamHealth, are both private equity owned and together account for approximately 30% of the outsourced physician market in the United States. Cooper, Z., Scott Morton, F., & Shekita, N. (2020). Surprise! Out-of-Network Billing for Emergency Care in the United States. *Journal of Political Economy*, 128(9), 3626–3677. <https://doi.org/10.1086/708819>. We do not discuss surprise and its competition implications here because the federal government has recently, over the strong objections of private equity firms, banned the practice, a development we do discuss in Section VI.C.

¹⁴⁴ See, e.g., *FTC v. Sanford Health*, No. 1:17-CV-133, 2017 WL 10810016(D.N.D. 2017) (enjoining merger and citing evidence that [...]); *Saint Alphonsus Med. Ctr.-Nampa Inc. v. St. Luke’s Health Sys., Ltd.*, 778 F.3d 775 (9th Cir. 2015)(upholding order requiring divestiture of physician groups by hospital chain which concentrated primary care market finding that the merger [...]). Austin, D. R., & Baker, L. C. (2015). Less Physician Practice Competition Is Associated With Higher Prices Paid For Common Procedures. *Health Affairs*, 34(10), 1753–1760. <https://doi.org/10.1377/hlthaff.2015.0412> (finding higher levels of physician practice concentration correlated with price increases); Dunn, A., & Shapiro, A. H. (2014). Do Physicians Possess Market Power? *The Journal of Law and Economics*, 57(1), 159–193. <https://doi.org/10.1086/674407> (empirical study finds consolidation among physicians enables them to exercise market power); Vogt, W. B., Williams, C. H., & Town, R. (2006, February). *How has hospital consolidation affected the price and quality of hospital care?* (Research Synthesis Report No.9). Robert Wood Johnson Foundation. [https://www.rwjf.org/en/library/research/2006/02/how-has-hospital-consolidation-affected-the-price-and-quality-of.html#:~:text=Research%20suggests%20hospital%20prices%20increased,but%20so%20do%20its%20competitors.\(meta-analysis%20finding%20hospital%20consolidation%20leads%20to%20decreased%20quality%20of%20care%20and%20increased%20prices\).](https://www.rwjf.org/en/library/research/2006/02/how-has-hospital-consolidation-affected-the-price-and-quality-of.html#:~:text=Research%20suggests%20hospital%20prices%20increased,but%20so%20do%20its%20competitors.(meta-analysis%20finding%20hospital%20consolidation%20leads%20to%20decreased%20quality%20of%20care%20and%20increased%20prices).)

acquisitions that decrease competition can also diminish incentives for the combined provider to expand services, acquire new technology, and improve quality and access to services.¹⁴⁵

The impacts of these practices in healthcare, however, are not limited to dollars. When insurance and care become more expensive, patients may go uninsured and forego care entirely. Even when patients have insurance or get care, inflated prices and practices such as surprise billing have fueled a shocking rise in individual medical bankruptcies. Decreased quality of care from reduced competition can lead directly to worse health outcomes and loss of life.¹⁴⁶

In what follows, we highlight some of the most significant competitive concerns surrounding private equity's increased role in healthcare.¹⁴⁷ This discussion is by no means exhaustive.

MARKET CONCENTRATION

Consolidation and market concentration are of perpetual and significant concern in antitrust. Concentrated markets decrease incentives for competition, increase the incentive and ability of companies to collude, and can lead to consolidation in related markets. It is well-established that prices in concentrated markets are generally higher and quality is generally lower.¹⁴⁸

Consolidation and market concentration issues in healthcare are particularly acute. Heavy and varied regulatory burdens, complex compensation models, and inelastic demand all create an environment where markets function imperfectly at best.¹⁴⁹ Finally, several decades of underenforcement of the antitrust laws in healthcare markets—particularly hospitals—have allowed concentration to grow and for anticompetitive mergers and contracting practices to proceed without challenge.

Because consolidating fragmented markets is central to private equity's strategy in healthcare, increased market concentration is an obvious concern. The response to this concern, however, must account for the limited scope of U.S. antitrust laws. Antitrust law does not condemn mergers simply because they increase concentration, but only if they also risk harm to competition and consumers.¹⁵⁰ But, market concentration, particularly market concentration beyond a certain threshold, so often leads to harm to competition and consumers that increasing concentration is a

¹⁴⁵See, e.g., Complaint ¶ 7, Federal Trade Commission, *FTC v. Sanford Health*. No. 1:17-CV-133, 2017 WL 10810016 (filed June 21, 2017).

¹⁴⁶See, e.g., Complaint ¶ 7, Federal Trade Commission, *FTC v. Sanford Health*. No. 1:17-CV-133, 2017 WL 10810016 (filed June 21, 2017).

¹⁴⁷[1] One extremely troubling practice pioneered and perfected by private equity firms is not discussed in depth here: surprise billing. Instead of agreeing to in-network rates with insurance companies, the private equity-owned physician staffing firms, providing staffing for emergency rooms at in-network hospitals, determined it was more profitable to stay out of network and bill patients at higher rates (or, alternatively, threatening to go out of network to demand higher in-network rates). This practice has been discussed extensively elsewhere and, as discussed in the following section, was largely banned by Congress in December of 2020, over the strong and well-funded objections of private-equity-backed interest groups. See No Surprises Act, H.R. 3630, 116th Cong. (2020).

¹⁴⁸Koch, T. & Ulrick, Shawn W. (2017, August). *Price Effects of a Merger: Evidence from a Physician's Market*. Federal Trade Commission. <https://www.ftc.gov/reports/price-effects-merger-evidence-physicians-market>

¹⁴⁹Gaynor, M. (2020, March). *What To Do about Health-Care Markets? Policies to Make Health-Care Markets Work?*. Brookings. https://www.brookings.edu/wp-content/uploads/2020/03/Gaynor_PP_FINAL.pdf

¹⁵⁰Importantly, the Clayton Act, the primary statute addressed to mergers, does not require that the harm from mergers be realized or certain at the time of the merger; rather, it prohibits mergers that increase the risk of harm to competition. Clayton Act, 15 U.S.C. §§ 12-27 (1914). This is often referred to as the "incipiency standard." And, while this reading of the Clayton Act is not universally accepted, it is widely acknowledged.

concern that at least merits close scrutiny to evaluate its impacts on competition. Mergers that are not supported by evidence of efficiencies or other competition benefits are particularly suspect.

Although private equity firms often pay lip service to efficiencies and economies of scale to be achieved by consolidation, in many cases the benefits of consolidation are purely financial—allowing the consolidated company to access new levels and types of debt not available to smaller companies.¹⁵¹ Such access to debt is not a cognizable efficiency, meaning that it would not be the sort of benefit from a merger that could justify that merger under the antitrust laws. Beyond access to debt, private equity investors often tout consolidation as a means to increase bargaining leverage with insurers. Again, such bargaining leverage is not a cognizable efficiency.¹⁵² Rather, increased bargaining leverage is intimately related with increased market power.¹⁵³ The methods private equity firms use to consolidate healthcare providers often allow them to largely avoid formal scrutiny or limitation by antitrust authorities in real time. As a result, the increased market concentration wrought by private equity firms often goes unnoticed until its anticompetitive effects are felt.

Thanks largely to the work of Appelbaum and Batt, authorities and policymakers have recently begun to appreciate and confront the degree to which private equity firms have already consolidated certain hospital and healthcare provider markets. For example, Appelbaum and Batt document how two private equity firms have gained control of 30 percent of outsourced physicians.¹⁵⁴ Those private equity firms subsequently leveraged that control to engage in predatory and anticompetitive surprise billing practices. Appelbaum, Batt and others have also covered the tremendous consolidation among air ambulance providers, where two private equity-owned air ambulance firms supplied 64% of the Medicare market as of 2017.^{155, 156} Coincident with this consolidation in the air ambulance market, the average cost of an air ambulance trip increased by 60 percent in just five years.¹⁵⁷

As damning as these examples are, they underappreciate the scope of the problem, because they focus on nationwide market shares and concentrations. From a patient perspective, most healthcare markets are local, encompassing a surprisingly small geographic area.¹⁵⁸ The reason for

¹⁵¹ Strebulaev.

¹⁵² *United States v. Anthem, Inc.*, 236 F. Supp. 3d at 181-82 (“[T]he antitrust laws are designed to protect competition, and the claimed efficiencies do not arise out of, or facilitate, competition.”); Greaney, T.L. & Richman, B.D. (2018, July 12). *Consolidation in Provider and Insurer Markets: Enforcement Issues and Priorities 2*, at 13-14. American Antitrust Institute. https://www.antitrustinstitute.org/wp-content/uploads/2018/09/AAI_Healthcare-WP-Part-I_6.12.18.pdf, at 13-14.

¹⁵³ Appelbaum, E., & Batt, R. (2020, March). *Private Equity Buyouts in Healthcare: Who Wins, Who Loses?* (Working Paper No. 118). Institute for New Economic Thinking Working Paper Series. <https://doi.org/10.36687/inetwp118>

¹⁵⁴ Appelbaum, E., & Batt, R. (2020, March). *Private Equity Buyouts in Healthcare: Who Wins, Who Loses?* (Working Paper No. 118). Institute for New Economic Thinking Working Paper Series. <https://doi.org/10.36687/inetwp118>

¹⁵⁵ *Ibid* at 1-113. <https://doi.org/10.36687/inetwp118>

¹⁵⁶ Adler, L, Hannick, K., & Lee, S. (2020, October 13). *High air ambulance charges concentrated in private equity-owned carriers*. Brookings. <https://www.brookings.edu/blog/usc-brookings-schaeffer-on-health-policy/2020/10/13/high-air-ambulance-charges-concentrated-in-private-equity-owned-carriers/>

¹⁵⁷ United States Government Accountability Office, Report to Congressional Committees, *Air Ambulance: Available Data Show Privately-Insured Patients Are at Financial Risk* 17-18 (GAO-19-292). <https://www.gao.gov/assets/gao-19-292.pdf>. The GAO’s report notes that complete data sets on air ambulance flights and billing practices are not available, but that the report is based on the best and most comprehensive data source available, a data set compiled by FAIR Health. *Ibid* at 4.

¹⁵⁸ See, e.g., *FTC v. St. Luke’s Health System Ltd., Saint Alphonsus Med. Ctr.-Nampa Inc. v. St. Luke’s Health Sys., Ltd.*, 778 F.3d 775 (9th Cir. 2015) (defining geographic market in hospital merger as the immediate Nampa, ID area, thus excluding Boise, ID which was 20 miles away); Federal Trade Commission. (2015, October 15). *Keystone Orthopaedic Specialists, LLC, and Orthopaedic Associates of Reading, Ltd., In the Matter of*. <https://www.ftc.gov/enforcement/cases-proceedings/141-0025/keystone-orthopaedic>

this is straightforward: people mostly seek healthcare where they live and work. For serious ailments or rare conditions, people will travel. But, generally, patients choose between the doctors and hospitals within a few miles of their homes or workplaces. Pricing patterns in healthcare markets reflect the fact that the presence or absence of local competitors is a primary driver of healthcare pricing.¹⁵⁹ Some of those who do focus on these local and regional markets have identified private equity as one of the major contributors to this concentration problem.¹⁶⁰

For example, a patient that requires transportation by air ambulance is largely indifferent to which companies operate nationwide; what matters to that patient is what companies operate where he or she requires the services. While it is concerning that two firms control 64% of the national air ambulance market share, it is downright distressing for residents of and visitors to Hawaii that there are only two such operators there, a state where patients and hospitals are often separated by water. And, but for a consent decree from the FTC, there would only be one such provider.¹⁶¹

The FTC was able to block the 2-to-1, private-equity-driven consolidation in the Hawaii air ambulance market because the nationwide deal between the two merging air ambulance companies was big enough to trigger mandatory reporting and pre-merger clearance under the Hart-Scott-Rodino Act (“HSR”). Many private equity rollups and other concentrative mergers in local healthcare markets are not part of larger national deals or independently large enough to trigger HSR reporting and clearance requirements.¹⁶² Experts estimate that 22 percent of local physician markets nationwide were highly concentrated as of 2013.¹⁶³ And, since 2013, private equity of outpatient clinics and patient services have grown five-fold.¹⁶⁴

The air ambulance example is unusual, though, because it actually triggered antitrust reporting and enforcement. For the most part, these individual acquisitions are too small to trigger Hart-Scott-Rodino reporting requirements and, as a result, very few were challenged by the agencies.¹⁶⁵ The potential implications of this stealth consolidation are profound. Recent work focused on the dialysis industry found that proposed acquisitions of those facilities that would result in monopoly are blocked more than 80% of the time when they are a part of reportable mergers but less than 2% of the time when not reportable.¹⁶⁶ In addition, the author found that the changes to dialysis market structures as a result of these stealth mergers reduced quality of care, as measured by

specialists-llc-orthopaedic-associates (defining geographic market for orthopedists as Berks Co., Pennsylvania, an area of less than 1,000 square miles); Dunn (empirical study suggesting physician markets may be as small as 20 minutes driving time).

¹⁵⁹ See Gaynor, supra note 3 at 7 (explaining two-stage competition in healthcare and observing that “if insurers do not have a good alternative to a particular provider, then that provider does not have to compete hard to be included in a network and can command higher prices (or lower provider quality).”)

¹⁶⁰ Gudiksen, K. L., & King, J. S., Legislative Options to Address Consolidation and Market Power in Healthcare Provider Markets in Nevada at 9-10 (2021, January 15) (discussing Nevada metropolitan areas) (unpublished manuscript on file with the authors).

¹⁶¹ Ibid at 3.

¹⁶² Gaynor, supra note 3, at 12 (“It is important to note that the vast majority of physician practice mergers and many hospital acquisitions of physician practices are not reported to the federal antitrust enforcement agencies because these transactions are often too small to fall under the Hart-Scott-Rodino reporting guidelines.”)

¹⁶³ Capps, C., Dranove, D., & Ody, C. (2017, September). Physician Practice Consolidation Driven by Small Acquisitions, So Antitrust Agencies Have Few Tools to Intervene. *Health Affairs*, 36(9), 1556-1563. <https://doi.org/10.1377/hlthaff.2017.0054>

¹⁶⁴ See Figure 3.

¹⁶⁵ Capps, Dranove, and Ody, supra n.108 at 1557. See Gudiksen, K.L. & King, J.S. (2021, Jan. 15). *Legislative Options to Address Consolidation and Market Power in Healthcare Provider Markets in Nevada* at 9-10 (2021, Jan. 15) (unpublished manuscript on file with the authors).

¹⁶⁶ Wollmann, T. G. (2020). How to Get Away with Merger: Stealth Consolidation and Its Real Effects on US Healthcare. NBER Working Papers 27274, National Bureau of Economic Research, Inc.

higher hospitalization rates and lower survival rates.¹⁶⁷ Another example can be found in dermatology, which has experienced a wave of private equity-driven consolidation.¹⁶⁸ Recent empirical evidence from Braun, Bond, Qian, Zhang, and Casalino published in *Health Affairs* found that private equity acquisitions of dermatology practices were associated with 3-5% increases in prices paid by insurers to acquired practices.¹⁶⁹

Concentration increases prices and reduces patient choice, but it also increases the incentives and opportunities for collusion between what competitors remain. This link is well documented in the case law and academic literature.¹⁷⁰ In essence, it is harder to coordinate a conspiracy with many players. As a result, where a few competitors control a meaningful share of a market, it is relatively easier for them to sustain anticompetitive agreements.¹⁷¹ In addition, concentrated markets enable coordination short of agreement that can also hamper competition, such as price signaling.¹⁷² That private equity firms often invest in companies together as consortia and buy and sell companies to one another further increases the incentives and opportunities for collusion between them.¹⁷³ A robust literature documents the role of pre-existing cooperative relationships between companies in facilitating subsequent anticompetitive conspiracies.¹⁷⁴

The recently filed criminal charges against Surgical Care Affiliates LLC (SCA) provide an extreme but illustrative example. SCA is now a wholly owned subsidiary of UnitedHealth. But the criminal charges in the indictment focus on a period from 2010 to 2017 when SCA was owned by private equity firms including TPG Capital.¹⁷⁵ In the indictment, DOJ alleges that SCA, a nationwide ambulatory surgery company with 230 clinics nationwide, entered into two separate conspiracies with its competitors not to hire one another's high-level outpatient surgical employees.¹⁷⁶ Such agreements are often referred to as "no poach" agreements. The indictment does not name SCA's co-conspirators, referring to them only as Company A and Company B, but the complaint in a private follow-on case asserts that Company A is United Surgical Partners Holding Company,

¹⁶⁷ *Ibid.*

¹⁶⁸ Resneck, J. S., Jr. (2018). Dermatology Practice Consolidation Fueled by Private Equity Investment: Potential Consequences for the Specialty and Patients. *JAMA Dermatology*, 154(1), 13–14. <https://doi.org/10.1001/jamadermatol.2017.5558>

¹⁶⁹ Braun, R. T., Bond, A. M., Qian, Y., Zhang, M., & Casalino, L. P. (2021). Private Equity In Dermatology: Effect On Price, Utilization, And Spending. *Health Affairs*, 40(5), 727–735. <https://doi.org/10.1377/hlthaff.2020.02062>

¹⁷⁰ Posner, E. A., Morton, F. S., & Weyl, E. Glen. (2017, March 22). A Proposal to Limit the Anti-Competitive Power of Institutional Investors, Working Paper. ("Courts have acknowledged the dangers of coordinated effects when mergers concentrate an industry."); Patel, M. (2018). Common Ownership, Institutional Investors, and Antitrust. *Antitrust Law Journal*, 82, 279–334. ("High levels of HHI are presumed to increase the likelihood of coordinated effects, which makes it more likely that the merger will be deemed unlawful.")

¹⁷¹ *In re Text Messaging Antitrust Litig.*, 782 F.3d 867, 871 (7th Cir. 2015) ("It is true that if a small number of competitors dominates a market, they will find it safer and easier to fix prices than if there are many competitors of more or less equal size But the other side of this coin is that the fewer the firms, the easier it is for them to engage in 'follow the leader' pricing ... which means coordinating their pricing without an actual agreement to do so.")

¹⁷² *Ibid.*

¹⁷³ Posner et al, *supra* note 11, at 19 ("We note that institutional owners who have legitimate reasons to speak and discuss business details with top management of many firms in an industry may use this position to create or promote illegal agreements among competitors."); *ibid* at 19 n.77 (noting in the context of institutional investors that "[i]t is also possible that jointly governing a firm may allow for competing funds to collude with each other.").

¹⁷⁴ *Hosp. Corp. of Am. v. F.T.C.*, 807 F.2d 1381, 1388 (7th Cir. 1986) ("[A] market in which competitors are unusually disposed to cooperate is a market prone to collusion. The history of successful cooperation establishes a precondition to effective collusion—mutual trust and forbearance, without which an informal collusive arrangement is unlikely to overcome the temptation to steal a march on a fellow colluder by undercutting him slightly. That temptation is great.")

¹⁷⁵ Naso, C. (2017, January 9). UnitedHealth Group Nabs Surgical Care Co. in \$2.3B Deal. *Law360*.

<https://www.law360.com/articles/878671/unitedhealth-group-nabs-surgical-care-co-in-2-3b-deal><https://www.law360.com/articles/878671/unitedhealth-group-nabs-surgical-care-co-in-2-3b-deal>

¹⁷⁶ U.S. Dep't of Justice. (2021, January 7). Health Care Company Indicted for Labor Market Collusion. <https://www.justice.gov/opa/pr/health-care-company-indicted-labor-market-collusion>

Inc.¹⁷⁷ USPI is the largest ambulatory surgery platform in the country and owns and operates over 550 outpatient medical facilities and other facilities.¹⁷⁸ USPI is now a subsidiary of Tenet Healthcare, but at the time of the alleged conspiracy, USPI was, like SCA, owned by a private equity company, Welsh Carson Anderson & Stowe.¹⁷⁹ The third major player in ambulatory surgery centers in the United States is Envision, also private-equity owned and discussed above.¹⁸⁰

Private equity is by no means the only driver of consolidation in healthcare markets. But private equity business models built around consolidation and leverage contribute significantly to the problem. Moreover, they do so without scrutiny, because most of the deals are too small to trigger current reporting requirements. Recent attention focused on the national market shares private equity firms have amassed in certain healthcare areas are important, but more critical is the concentration being driven by private equity in local geographic markets where patients (and thus insurers) actually shop for healthcare. Beyond its direct impact on prices and competition, concentration of markets also facilitates anticompetitive conspiracies between what few competitors remain. The overlapping and repeated relationships between private equity firms only amplify this risk, as the recent criminal indictment of SCA illustrates.

MULTI-MARKET CONTRACTING

Antitrust concerns surrounding private equity firms' push to consolidate healthcare providers are compounded by the fact that these companies will often move into multiple local markets in one geographic area or into multiple specialties in a single geographic market. Although recent research has begun to reveal the fact and extent to which such "cross-market" mergers lead to increased prices and other anticompetitive effects,¹⁸¹ such mergers were historically viewed as not presenting a competition issue and such mergers were routinely cleared by antitrust authorities.

That research has shown that cross-market mergers may, in fact, involve overlapping markets that were not previously appreciated.¹⁸² But, in addition, they raise concerns that the companies will use multimarket contracting and other techniques to amplify whatever leverage they obtain in a particular local market or specialty. Through such techniques, a company can leverage a dominant market position in one geographic market or provider specialty to force insurers to include its hospitals or providers in other markets or specialties in their networks at favorable prices. This can have deleterious effects on price competition throughout the market and result in increased provider prices across the board.¹⁸³

Multimarket contracting is a strategy directed at bargaining with insurance companies over inclusion in their networks. Health insurers, not individual patients, are generally recognized as the

¹⁷⁷ Complaint at ¶ 21, *Spradling v. Surgical Care Affiliates, LLC et al.*, No. 1:21-cv-01324 (N.D. Ill. March 9, 2021).

¹⁷⁸ *Ibid* at ¶ 18.

¹⁷⁹ Kennedy, J. (2015, March 23). Tenet, USPI to Combine Outpatient and Short-Stay Centers. *Law360*. Tenet purchased just over 50% of the company in 2015, *ibid.*, and completed its purchase in 2018, see *Spalding Complaint* ¶ 30.

¹⁸⁰ Complaint at ¶ 30, *Spradling v. Surgical Care Affiliates, LLC et al.*, No. 1:21-cv-01324 (N.D. Ill. March 9, 2021).

¹⁸¹ Dafny, L., Ho, K., & Lee, R. S. (2019). The price effects of cross-market mergers: Theory and evidence from the hospital industry. *The RAND Journal of Economics*, 50(2), 286–325. <https://doi.org/10.1111/1756-2171.12270>.

¹⁸² Brand, K. & Rosenbaum, T. (2019). A Review of the Economic Literature on Cross-Market Mergers. *Antitrust L.J.* 533, 535-36.; Varanini, E. E. (2020). Addressing the Red Queen Problem: A Proposal for Pursuing Antitrust Challenges to Cross-Market Mergers in Health Care Systems. *Antitrust Law Journal*. 83(2), 509-26.

¹⁸³ Varanini, E. E. (2020). Addressing the Red Queen Problem: A Proposal for Pursuing Antitrust Challenges to Cross-Market Mergers in Health Care Systems. 83 *Antitrust L.J.* 509, No. 2. See also Gudiksen, *supra* n.141, at 16-18 (discussing anticompetitive harms from multi-market and all-or-nothing contracting).

primary drivers of price competition in healthcare markets.¹⁸⁴ This is because individual patients do not tend to shop for providers based on price. Instead, they choose healthcare providers based on whether the provider is in their insurance network, the provider's proximity to their home or job, and the provider's reputation and other quality measures. As a result, healthcare markets are characterized by two-stage competition. At the first stage, providers compete on price for inclusion in insurers' networks. At the second stage, in-network providers compete to get insured patients to use their services by touting their quality and convenience.

To make their insurance products appeal to wide swaths of people or to employers with diverse employees spread over a broad area, and to comply with state-law network sufficiency and federal ERISA requirements health insurers generally seek to construct networks that include a variety of providers in most specialties and in most geographic areas where their insureds may need care. State-level network adequacy laws have a similar effect. For a health insurer that seeks to sell insurance plans to companies located in, for example, California, this generally requires including hospitals and doctors from each local healthcare market in the state and from each specialty. If a single company controls hospitals or physician groups that dominate a particular specialty in multiple local markets or controls physician groups that dominate several different specialties in a single local market, this presents an opportunity for the company to leverage its multimarket presence via anticompetitive contracting practices to amplify its market power. The acquisition patterns and strategies in healthcare suggest they are positioning themselves to take advantage of these anticompetitive practices.

EXACERBATING EXISTING COMPETITION PROBLEMS

Intriguing new research suggests that private equity investors are particularly sensitive to competition conditions in the markets where they operate. A recent study by Gandhi, et al., of nursing homes found that private equity managers compete more vigorously than non-private equity managers do in unconcentrated markets, but compete less vigorously in concentrated markets than do non-private equity managers. If this result is born out in other nursing home studies and across other aspects of healthcare delivery, it has significant implications for the impact of private equity investment on healthcare markets. In contrast to a "maverick" firm that can serve as an important competitive force to infuse concentrated markets with competition, private equity investors appear to operate as a sort of "anti-maverick" force, exacerbating existing competition conditions, for better or for worse.¹⁸⁵

The sensitivity of private equity managers to competitive conditions, and particularly to a lack of¹⁸⁶competition, means that we should be particularly concerned when private equity investment is directed at highly concentrated markets or at markets that otherwise lack effective competition.

¹⁸⁴ Cooper, Z., Craig, S. V., Gaynor, M., & Van Reenen, J. (2019). The Price Ain't Right? Hospital Prices and Health Spending on the Privately Insured*. *The Quarterly Journal of Economics*, 134(1), 51-107. <https://doi.org/10.1093/qje/qjy020>.

¹⁸⁵ Gandhi, et al., also note that this characteristic of private equity managers is an instance of the differences in inclination to compete that characterizes maverick firms. ("Unlike maverick firms, competitively sensitive firms are not necessarily strong competitors. Rather, they are more likely to exploit available market power to the detriment of consumers, but they are also more likely to compete aggressively to the benefit of consumers when competition is strong.")

¹⁸⁶ Recent research on hospitals has suggested that private equity firms tend to acquire more profitable hospitals with higher charge-to-cost ratios in areas with higher HHIs than hospitals not acquired by private equity. See Offodile II, A. C., Cerullo, M., Bindal, M., Rauh-Hain, J. A., & Ho, V. (2021, May). Private Equity Investments In Health Care: An Overview Of Hospital And Health System Leveraged Buyouts, 2003-17. *Health Affairs*, 40(5), 719-726. <https://doi.org/10.1377/hlthaff.2020.01535>

Research suggests that private equity investment in such scenarios will only worsen the competitive situation. Moreover, this feature of private equity provides an additional reason why efforts by private equity to consolidate markets merit extra scrutiny; if private equity firms are successful at reducing competition in healthcare markets, this research suggests the private equity firms will then be unusually aggressive at exploiting that reduction in competition to enrich themselves at the expense of consumers. This concern is particularly acute in healthcare, because the combination of health insurance and regulatory restraints means that even monopoly or supramonopoly prices do not reduce consumption as they would in most markets.¹⁸⁷

An additional, related concern is that private equity firms, because they are so sensitive to competitive conditions, may be prone to engaging in anticompetitive contracting practices that are already an issue in healthcare: namely, anti-steering and anti-transparency practices. Private equity's multi-market investing pattern, discussed above, sharpens this concern, as these contracting practices have been used by non-private-equity providers to reinforce the leverage obtained through multi-market contracting practices.¹⁸⁸

Anti-steering is usually implemented during the contracting between a provider and health insurers, where a provider with leverage will insist on inclusion of anti-steering clauses in the contract for inclusion in the insurer's network. Such clauses prohibit an insurer from using tiering, co-pays, and co-insurance to steer patients away from the unwanted or unneeded facilities and providers that have been included in the network due to all-or-nothing or multi-market contracting practices. But for these anti-steering clauses, insurers might steer its insureds away from the provider if it is a higher-cost or lower-quality provider by creating incentives for patients to visit providers that offer better value. By contractually prohibiting steering, however, providers with leverage can further insulate themselves from price or quality competition.

Anti-transparency or so-called gag clauses are contractual provisions that prohibit insurers from publicizing the fact that some providers in their network are more expensive or provide less value than others. Such clauses may also prohibit the insurer from providing pricing information to price-transparency tools designed to allow patients or employers to compare prices across providers and plans or even to companies shopping for self-insurance networks. Recent federal legislation requiring certain providers to disclose their contracted rates for some services may neutralize these gag clauses to an extent.¹⁸⁹ But they are an incomplete solution, at best.

Again, these practices are not unique to private equity, but private equity acquisition patterns and strategies in healthcare suggest they are positioning themselves to take advantage of these anticompetitive practices. Two recent antitrust cases premised on the theory that these

¹⁸⁷ Havighurst, C.C. and Richman, B.D. (2007, Jan.), Distributive Injustice(s) in American Health Care, Duke Law School, Research Paper No. 140. *See also* Richman, note 4, at 141.

¹⁸⁸ Complaint, People of the State of California ex rel. Xavier Becerra, v. Sutter Health, SUPERIOR COURT OF THE STATE OF CALIFORNIA, CGC-14-538451

Consolidated with CGC-18-565398 (July 9, 2020),

https://oag.ca.gov/system/files/attachments/press_releases/Sutter%20Complaint.pdf

¹⁸⁹ Consolidated Appropriations Act, H.R. 133, 116th Cong. (2020)

contracting practices are anticompetitive have resulted in meaningful settlements.¹⁹⁰ Neither of these cases involved private equity. However, in evaluating the competitive impact of private equity healthcare provider acquisition patterns and trends, these cases and the practices behind them are significant, as they highlight a serious risk from geographically dispersed networks and from multi-specialty markets in a single geographic area.

Several states have tried, and in a few instances succeeded, in passing legislation banning anti-steering and anti-transparency clauses. Outside of these few states, and the federal price-disclosure law already discussed, however, no federal law expressly bans these practices and guidance from federal antitrust agencies does not directly address it.¹⁹¹ And, although the two settlements to date suggest that engaging in these contracting practices is legally risky, private equity has shown a tremendous appetite for risk. Moreover, the two cases to date have involved very clear evidence of widespread misconduct affecting a large volume of healthcare spending. It is not clear that the threat of litigation under current law can be expected to deter less categorical practices in smaller markets. Note that it is not necessary that private equity firms have this type of anticompetitive leveraging as an express motivation in order for this risk to obtain. Whatever private equity's reason for building these networks, once they are assembled, the risk that their owners will apply multimarket leverage is present and can be realized by any future management or ownership.

JOINT OWNERSHIP

Finally, even absent any of the tactics already discussed, the private equity practice of buying ownership stakes in multiple providers in a single market can reduce competition and increase prices. A growing body of scholarship demonstrates the harm to competition from passive joint ownership of relatively small stakes in multiple competitors in a single market.¹⁹² The mechanisms by which competition is diminished by common ownership are not fully understood, but the effects are significant and well-documented.

Most of the recent scholarship has focused on institutional investors and the threat to competition posed by their practice of taking relatively small stakes in multiple companies within an industry. Historically, because these investments are usually passive, they have not been viewed as a significant competitive threat. Recent groundbreaking work, however, has established that even small, passive investments in multiple companies in the same industry can have a significant anticompetitive effect, driving up prices.¹⁹³

¹⁹⁰ Koenig, B. (2019, Dec 20). Sutter Health, Calif. AG Antitrust Deal Valued at \$575M. Law360; U.S. Dep't of Justice. (2018, November 15). Atrium Health Agrees to Settle Antitrust Lawsuit and Eliminate Anticompetitive Steering Restrictions. <https://www.justice.gov/opa/pr/atrium-health-agrees-settle-antitrust-lawsuit-and-eliminate-anticompetitive-steering>

¹⁹¹ In 2019, Congress considered but did not pass legislation that would have banned many of these contracting practices. See Lower Health Care Costs Act of 2019 (S.1895). See also, Gudiksen, supra n.141, at 15 (discussing same).

¹⁹² Moss, D. L. (2020, November 4). What Does Expanding Horizontal Control Mean for Antitrust Enforcement? A Look at Mergers, Partial Ownership, and Joint Ventures. White Paper, American Antitrust Institute. https://www.antitrustinstitute.org/wp-content/uploads/2020/11/Moss_Horizontal-Control_11.4.20.pdf.

¹⁹³ Posner et al; Azar, J. (2012, May). A New Look at Oligopoly: Implicit Collusion Through Portfolio Diversification, Market Power, and the Theory of the Firm. Princeton. <http://www.princeton.edu/~smorris/pdfs/PhD/Azar.pdf>; Azar, J. (2017, September 22). *Portfolio Diversification, Market Power, and the Theory of the Firm* [unpublished manuscript]. <https://www.tse-fr.eu/sites/default/files/TSE/documents/sem2017/finance/azar.pdf>; Azar, J., Schmalz, M. C., & Tecu, I. (2018, May 10). Anticompetitive Effects of Common Ownership. *Journal of Finance* 73(4), 1513-65. <https://doi.org/10.1111/jofi.12698>; Baker, J. B. (2016). *Overlapping Financial Investor Ownership, Market Power, and Antitrust Enforcement: My Qualified Agreement with Professor Elhauge*. *Harvard Law Review* 129:212, 212-32. https://harvardlawreview.org/wp-content/uploads/2016/03/vol129_Baker-2.pdf

For institutional investors, such as pension funds, once joint ownership is recognized as a competitive threat, its occurrence is relatively easy to spot.¹⁹⁴ The opacity of the public equity business model, however, makes it unlikely under current law that any joint ownership issues in private equity would even be noticed. This lack of transparency makes it impossible to know the scope of the threat that joint ownership by private equity poses, but there are reasons to believe that, particularly in healthcare, this is a real and underappreciated concern.

Virtually every major private equity player has a division or subsidiary devoted to healthcare. Selling to another private equity company is a common exit strategy for private equity firms in the healthcare space. And, private equity firms will often team up on investment opportunities. In addition, private equity managers are compensated based on the performance of the fund overall, not the performance of any particular portfolio company in which the fund invests, undermining incentives for private equity managers to engender competition between their portfolio companies in the same industry. The result is that the healthcare private equity space is full of overlapping repeat players with stakes in multiple companies in the same industry. This presents multiple opportunities for active collusion between funds or across portfolios of companies held by a single fund, as discussed above.¹⁹⁵ But, even without any collusion or active coordination, it bears asking whether the overlapping stakes by funds with multiple holdings in a given industry poses a competitive threat akin to that posed by diversified institutional investors.

As it stands, though, it is impossible to obtain enough information to even attempt to answer this question. The current antitrust and SEC reporting requirements fail to capture most of this overlapping ownership. The antitrust reporting requirements fail to capture it for the following reason: a private equity fund stakes multiple portfolio companies, but each of those portfolio companies remains a separate business entity. Thus, if a portfolio company buys a direct competitor of another portfolio company owned by the same private equity fund, even if the sale exceeds the Hart-Scott-Rodino Act reporting thresholds, and thus is reported to the FTC and subject to pre-approval, the acquiring portfolio company is not currently required to submit any information about the other portfolio companies owned by the same private equity fund, unless they are under joint management.¹⁹⁶

For example, suppose a private equity fund has two portfolio companies, A and B. A is a hospital chain and B is an electronic medical records company. If A seeks to buy an electronic medical records company that directly competes with B, and if the sale is big enough to require HSR reporting and preapproval, A will not be required to report to the FTC that its parent company, the

¹⁹⁴ That is not to say that it is an easy threat to neutralize or problem to solve. The anticompetitive effects from passive ownership by institutional investors do not fit the model of any traditional antitrust violations. Moreover, even to the extent that the conduct could be attacked through litigation under existing antitrust laws, the potential remedies and the uncertainty of the litigation process could have significant de-stabilizing effects on markets resulting in costly and undesirable side effects.

¹⁹⁵ See, e.g., Posner, et al., *supra* n.170, at 19 (noting that “institutional owners who have legitimate reasons to speak and discuss business details with top management of many firms in an industry may use this position to create or promote illegal agreements among competitors”); *id.* n.77 (further noting that “[i]t is also possible that that [sic] jointly governing a firm may allow for competing funds to collude with each other”).

¹⁹⁶ See Notice of Proposed Rulemaking. (Proposed December 1, 2020). Premerger Notification; Reporting and Waiting Period Requirements, 85 Fed. Reg. 77,053, 77,055 n.1 (to be codified at 16 CFR Parts 801-803) (explaining that current reporting and premerger notification requirements have not kept pace with evolving business forms and that current rules have created “scenarios in which it is difficult for the Agencies to assess the competitive impact of a transaction based on the HSR filings.”).

private equity fund, already owns B, a direct competitor of the company A seeks to acquire. Instead, A will only be required to report its own holdings, a chain of hospitals. Based on this reporting, the FTC is unlikely to find a competition problem, even though the acquisitions will result in the private equity fund owning large stakes in two directly competing medical records companies.

The SEC reporting requirements fail to capture the necessary information because the vast majority of private equity firms are privately held and, thus, exempt from most SEC reporting requirements. Before passage of the 2010 Dodd-Frank Act, most PE funds were not even required to register with the SEC, let alone provide detailed accountings of their holdings. And, while Section 404 of the Dodd-Frank Act has mandated some reporting by advisors of PE funds above a certain size,¹⁹⁷ the required information is primarily financial and for the purpose of assessing systemic financial risk.¹⁹⁸ In any event, these filings are not public, and therefore unavailable for the type of academic research that led to the groundbreaking results on joint ownership by institutional investors.

Compounding the threat of joint ownership for private equity firms is the fact that, unlike institutional investors, private equity investors are not typically passive; restructuring, adding to, and reforming portfolio companies are core strategies of the private equity model. Whereas the mechanisms for the observed upward pressure on prices from joint institutional ownership are not fully understood, the antitrust threat from active joint owners is apparent and long-recognized.¹⁹⁹ Without transparency, however, there is not a systematic mechanism to identify this threat in the private equity context.

* * *

These are just a few of the most apparent and immediate competition concerns from private equity's increasing role in healthcare markets. Without more data and transparency about private equity practices and transactions, it is impossible to know the scope and depth of the competition threat posed by private equity. What we can appreciate now, though, is that there are good reasons to be concerned and that urgent attention and study is needed.

¹⁹⁷ The SEC Form PF defines a "private equity fund" as "any private fund that is not a hedge fund, liquidity fund, real estate fund, securitized asset fund or venture capital fund and does not provide investors with redemption rights in the ordinary course." Joint Final Rules, CFTC 17 CFR Part 4 and SEC 17 CFR Parts 275 and 279, Reporting by Investment Advisors to Private Funds and Certain Commodity Pool Operators and Commodity Trading Advisors on Form PF, available at <https://www.sec.gov/rules/final/2011/ia-3308.pdf>. The new rules apply to advisors registered with the SEC that advise private funds having at least \$150 million in private fund assets under management, and the additional PE-specific reporting requirements apply to those managing more than \$2 billion in PE funds. Id.; see also SEC Form PF, available at <https://www.sec.gov/about/forms/formpf.pdf>.

¹⁹⁸ Appelbaum, E. & Batt, R. (2014). Private Equity at Work, 281-82.; see also Joint Final Rules, supra n.3. The only questions of any relevance to antitrust market analysis are question 77, which requires a percentage breakdown of the industries in which the fund is invested by NAICS code, and question 78, which requires a percentage breakdown by continental region of the geographic location of the fund's investments. SEC Form PF questions 77 and 78. Such general information, without a more detailed breakdown, is effectively useless for assessing competition concerns.

¹⁹⁹ See, e.g., Posner, et al. supra n.1 at 2 ("Antitrust scholars have long understood that when one owner, whether an investment company or not, acquires large stakes in two or more competitors, it will have an incentive to induce those competitors to compete less.").

C. STATE AND FEDERAL LEGISLATION

Some efforts have been made, with varying degrees of success, to address the harmful practices of private equity in medicine. We detail those briefly here.

A handful of states have introduced legislation specifically directed at private equity acquisitions and mergers of healthcare providers. Far more states have passed legislation to ban or restrict surprise or balance billing practices favored by private-equity-owned companies like Envision. Still others have more general laws directed at corporate ownership of medical practices, which are not directed at private equity per se, but nonetheless constrain private equity to an extent.

At the federal level, sweeping legislation against private equity practices across all sectors has been proposed, but has little chance of becoming law. A federal ban on surprise billing did recently become law, after a protracted and difficult fight. But there is more work to be done.

STATE LEGISLATION

At the state level, several states have observed the impact of private equity and concentration and consolidation in healthcare markets generally and have taken steps to address the issue. Most significantly, Washington and Connecticut have both enacted laws to require additional reporting of healthcare mergers to supplement Hart-Scott-Rodino reporting requirements.

In Washington, beginning in 2020, hospitals, hospital systems, and provider organizations must provide the Attorney General with no less than 60 days' notice of any "material change." The law defines "material change" broadly to include proposed mergers, acquisitions, or contracting affiliations between healthcare providers and does not include any monetary threshold for the reporting requirement. A narrower law enacted in Connecticut in 2014 requires providers to give 30 days' notice to the state before certain transactions.²⁰⁰ Several other states have also required notice requirements for the change of control, of licensure, or of credentialing for Medicaid enrollment.

Lawmakers in Florida recently proposed a notice provision like that in Washington, but it ultimately failed to pass. That bill would have required mandatory reporting of certain hospital or group practice mergers and other transactions. Florida House 1243.²⁰¹

In California, another landmark bill — SB 977 — narrowly failed to pass in 2020. SB 977 would have required consent of the Attorney General by a healthcare system, private equity group, or hedge fund prior to a change of control or acquisition involving a healthcare facility or provider. The bill provided that the Attorney General could deny consent unless the healthcare system, private equity group, or hedge fund demonstrated that the transaction would result in clinical integration, improved or maintained access for an underserved population, or both. Similarly, the

²⁰⁰Health care system consolidation: Attorney General approval and enforcement act, Senate SB-977. 2019 Reg. Sess. (CA 2020). https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201920200SB977

²⁰¹ Hospital or Group Practice Mergers, Acquisitions, and Other Transaction, H.B. 1243. (2019). <https://www.flsenate.gov/Session/Bill/2019/01243>

bill would have given the Attorney General the authority to weigh anticompetitive effects against potential benefits of clinical integration and increased or maintained access to services.²⁰²

The Nevada legislature also has two bills under consideration that were prompted, in part, by concern over private equity acquisition trends in healthcare. SB 329 would require parties to notify the state Department of Health and Human Services within 60 days of any acquisition, joint venture, or similar transaction involving a hospital or physician group. It would also ban certain anti-competitive contracting practices, such as all-or-nothing contracting, anti-steering provisions, and anti-tiering provisions.²⁰³ A.B. 47 would require reporting to the state Attorney General of certain healthcare transactions and would likewise prohibit certain anti-competitive contracting provisions.²⁰⁴ Both bills have passed one chamber of the legislature and have been sent to committee in the other chamber for consideration.

Another layer of state-level regulation of interest is laws restricting ownership of healthcare providers to licensed physicians. At the time of this writing, 30 states have laws on the books that, to varying degrees, mandate that healthcare provider organizations be owned by licensed providers.

For the most part, these laws were not enacted in response to private equity firms moving into the healthcare space. Instead, these laws have a long history tied to the separation of business and the provision of healthcare generally.²⁰⁵ The impact of these laws on competition is also mixed, at best. But, in any event, it does not appear these laws are particularly effective. Private equity firms have proven uniquely creative in the ways they have invented to skirt the spirit of these laws while abiding by their letter. For example, where states ban corporate ownership of medical practices, private equity firms have formed or acquired physician management firms which leave ownership and (purportedly) authority over medical care with physicians while the medical practice pays a fee to the private-equity-owned management company overseeing practice administration.²⁰⁶

FEDERAL LEGISLATION

In July of 2019, Senator Warren and Representative Pocan simultaneously introduced the Stop Wall Street Looting Act in the Senate and House, respectively. The proposed law is designed to prohibit many of the practices at the heart of the private equity profit model, such as banning private equity funds from paying themselves special dividends from their portfolio companies during the first two years after they invest, and increase liability of private equity funds for certain violations of existing laws.²⁰⁷ Finally, the bill would also make several changes to the bankruptcy

²⁰² Health care system consolidation: Attorney General approval and enforcement act, Senate SB-977. (2020).

https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201920200SB977

²⁰³ See S.B. 329, 81st Leg., 81st (2021) Sess. (NV. 2021),

<https://www.leg.state.nv.us/App/NELIS/REL/81st2021/Bill/7964/Overview>

²⁰⁴ See A.B. 47, 81st Leg., 81st (2021) Sess. (NV. 2020), <https://legiscan.com/NV/bill/AB47/2021>

²⁰⁵ Zhu, J. M. (2015). Private Equity Investment in Physician Practices, 2020. American Medical Association, Corporate Practice of Medicine, 1. <https://www.ama-assn.org/media/7661/download>

²⁰⁶ Meyer, H. (2019, August 31). Physician groups crave capital but worry about future sale. Modern Healthcare.

<https://www.modernhealthcare.com/physicians/physician-groups-crave-capital-worry-about-future-sale>; Batt, R., & Appelbaum, E.

(2019, September 9). Private Equity Tries to Protect Another Profit Center. The American Prospect.

²⁰⁷ Federal Trade Commission (2017, Jan.). *The FTC's Merger Remedies 2006-2012: A Report of the Bureaus of Competition and Economics*. https://www.ftc.gov/system/files/documents/reports/ftcs-merger-remedies-2006-2012-report-bureaus-competition-economics/p143100_ftc_merger_remedies_2006-2012.pdf

laws, giving workers higher priority as debtors and limiting payouts to executives and managers and closing a tax loophole that allows carried interest to be treated as capital gains.²⁰⁸ President Biden has recently indicated support for closing this tax loophole, which is an issue beyond just private equity.²⁰⁹

The Stop Wall Street Looting Act is not specific to healthcare or to competition issues. Nevertheless, to the extent that the private equity business model is driving concentration in healthcare, making private equity less profitable would be expected to reduce the prevalence of the model.

A much narrower law, directly targeting private equity practices in healthcare is the surprise billing ban that was included in the December 2020 Budget Bill.²¹⁰ The provision was the culmination of a long fight by patient advocates and lawmakers supporting the legislation against an active and aggressive lobbying campaign by organizations backed by private equity. The legislation bars providers from balance billing patients and, instead, forces out-of-network providers who provide care in emergency rooms or at in-network hospitals to either accept the patient's insurer's average in-network rate for the services provided or to enter into arbitration with the insurer. Regardless of the outcome of the arbitration, however, the patient cannot be billed more than he or she would have paid to receive the same services from an in-network provider.²¹¹

More than half of the states had already passed such laws, in various formulations. The federal ban, however, applies nationwide. In addition, it also applies to services where states have been prevented from legislating due to jurisdictional issues, most notably, air ambulances.²¹² One notable carve out not covered by the federal ban is ground ambulances.²¹³ Instead of banning balance billing by ground ambulances, the federal law mandates additional study of the economics of ground ambulance business models.²¹⁴ According to the bill, this carve out was motivated by concern that ground ambulance business models that are not exploitative might be unviable if providers are not allowed to bill patients at out-of-network rates.²¹⁵

VII. POLICY RECOMMENDATIONS

The evidence in our report leads to the conclusion that the private equity business model is, with few exceptions, ill-suited to the healthcare sector. It puts enormous financial pressure on the delivery of healthcare to produce short-term profits with little or no regard for detrimental health and quality-of-care outcomes. Likewise, private equity is transforming competition in healthcare

²⁰⁸ *Ibid.*

²⁰⁹ Parker, W. (2021, April 28). *Biden Proposal Would Close Longtime Real-Estate Tax Loophole*. Wall Street Journal. <https://www.wsj.com/articles/biden-proposal-would-close-longtime-real-estate-tax-loophole-11619647044>

²¹⁰ Consolidated Appropriations Act, H.R. 133, 116th Cong. (2020). <https://www.congress.gov/116/bills/hr133/BILLS-116hr133enr.pdf>

²¹¹ Appleby, J. (2020, December 22). *Congress Acts To Spare Consumers From Costly Surprise Medical Bills*. NPR.Org. <https://www.npr.org/sections/health-shots/2020/12/22/949047358/congress-acts-to-spare-consumers-from-costly-surprise-medical-bills>

²¹² Consolidated Appropriations Act, H.R. 133, 116th Cong. (2020). <https://www.congress.gov/116/bills/hr133/BILLS-116hr133enr.pdf>

²¹³ *Ibid.* Sec. 105

²¹⁴ *Ibid.* Sec. 106

²¹⁵ Kliff, S., & Sanger-Katz, M. (2020, December 21). *Surprise Medical Bills Cost Americans Millions. Congress Finally Banned Most of Them*. The New York Times. <https://www.nytimes.com/2020/12/20/upshot/surprise-medical-bills-congress-ban.html>

markets with little transparency or effective scrutiny. The weight of the evidence on the impact of private equity investment suggests it does a great deal more harm than good. Though more evidence is surely coming, the time to act is now. The soaring increase in private equity investments in healthcare over the last decade, which is showing signs of escalating, is a wake-up call. Without action by policymakers and regulators, private equity poses an existential threat to the foundations of our healthcare system.

The following is our list of steps and policy changes that will help to begin mitigating the most harmful impacts of private equity investments while allowing them to serve a positive role under the careful eye of regulators, legislators, and the public. Our study to date suggests several fruitful areas for immediate action by antitrust authorities, legislators, health regulators, and health professional associations, as well as several areas for further study:

- **HHS review of healthcare mergers. Following on state efforts to inject oversight and transparency into healthcare provider mergers and acquisitions, HHS should investigate expanding reporting and approval requirements for acquisitions of healthcare providers.** Because many of the issues with private equity investments in healthcare ultimately impact the quality of patient care and the stability and adequacy of healthcare provider markets, study and regulation of these business models should not be left to antitrust authorities alone. The huge investment of public funds in healthcare provides the federal government with a stake in healthcare spending and quality of care at least as significant as that of the states.
- **Increase transparency efforts and development of healthcare quality measures. As Gandhi, et al. show, the upside of private-equity's sensitivity to competitive conditions is that private equity managers are unusually responsive to pro-competition measures, such as quality ratings.²¹⁶** One would expect that private equity managers would demonstrate a similar responsiveness to pricing-transparency measures in markets with multiple competitors who compete on price. Accordingly, developing and implementing effective quality metrics and transparency tools may be an effective way to mitigate the negative competitive effects of private equity investment or even to harness the competitive sensitivity of private equity investors to infuse competition into healthcare markets.
- **Revise the Hart-Scott-Rodino Act reporting requirements. As the FTC acknowledges, HSR reporting requirements have not kept pace with evolutions in business forms and practices. Given the rapid increase in private equity investment in healthcare, changes are urgently needed.** We discussed the gap this creates in reporting of a private equity fund's holdings and how this hampers effective merger enforcement in Section VI.A. The FTC has already promulgated a proposed rule that would close this gap.²¹⁷ It should

²¹⁶ See Gandhi, et al. at 26 (finding that private-equity managers are more responsive than other managers to quality rating system in nursing homes).

²¹⁷ Premerger Notification; Reporting and Waiting Period Requirements, 85 Fed. Reg. 77,053 (Proposed December 1, 2020) (to be codified at 16 CFR Parts 801-803). Such an exemption would, among other things, add to the problem with stealth consolidation by private equity firms in the healthcare industry. See Comments of the American Antitrust Institute to the Federal Trade Commission on Project No. P110014, <https://www.antitrustinstitute.org/wp-content/uploads/2021/02/2021-02-01-AAI-Comments-on-HSR-NPRM-2-1-FINALR.pdf>.

swiftly adopt the portion of that rule that would require reporting of all of the interests held by the parent fund upon the event of a proposed acquisition by a portfolio company.

In the healthcare field in particular, there is another reporting gap that merits attention and regulation. As discussed in Section VI.A, and widely acknowledged by health economists and the antitrust agencies, healthcare provider markets are local. Accordingly, acquisitions too small in absolute size to trigger current HSR reporting requirements can have significant anticompetitive effects. We join others in proposing a streamlined reporting process at a significantly lower monetary threshold for mergers and acquisitions of healthcare providers. Moreover, because of the ability to use buy-and-build and accretive mergers to amass significant power through very small acquisitions, we propose that the reporting and review should be triggered if the current proposed acquisition, combined with all of the entities' acquisitions in the last five years, exceed the threshold. The point is not to stop these mergers, necessarily, but to make sure antitrust authorities have effective tools to monitor these markets and to recognize and arrest the mergers or merger strategies that threaten competition.

In making these recommendations, we recognize that reporting requirements place a burden on the businesses subject to them and also on the agencies tasked with reviewing the information reported. To minimize the burden on companies, we recommend a short form initial filing calling for little more than the names of parties, their location, their estimated value, and the other providers in the same local area or specialty owned or controlled by the acquiring company and its parent companies. To ensure the agencies have the resources to effectively review and pursue these reports as they arrive, we join the large chorus calling for more funding for the antitrust agencies.

- **Study implications for Stark Law, the federal Anti-Kickback Statute, and False Claims Act. We need to better understand the impact of private equity investment in physician practices on billing and referral practices.** The private equity business model, with its emphasis on consolidation and short-term revenue growth may lead private-equity-backed physician practices to engage in more problematic referral and billing practices and to exploit the Stark Law's carve-outs for in-office ancillary services to devise new business models. The work currently underway to better understand these practices is important. Congress and DHS should also investigate whether amendment of the Stark Law, Anti-Kickback Statute, or False Claims Act, or additional implementing regulations, funding, or changed enforcement practices, are needed to curb self-serving referrals or other anti-competitive business practices.
- **Adjust merger remedy guidance. In September of 2020, the DOJ released the Merger Remedies Manual that replaced its 2011 Policy Guide to Merger Remedies.** Regarding buyers of divestiture assets, the manual states: "The Division will use the same criteria to evaluate both strategic purchasers and purchasers that are funded by private equity or other investment firms. Indeed, in some cases a private equity purchaser may be preferred. The Federal Trade Commission's study of merger remedies found that in some cases funding from private equity and other investment firms was important to the success of the remedy because the purchaser had flexibility in investment strategy, was

committed to the divestiture, and was willing to invest more when necessary.”²¹⁸ Our research and analysis suggests this guidance may be misguided, particularly as applied to healthcare.²¹⁹ Although the DOJ does not typically handle healthcare mergers, the issues we and others have identified with respect to private equity buyers extend beyond healthcare and suggest this guidance should be modified or withdrawn.²²⁰

In any event, both agencies should reexamine the DOJ guidance and the FTC study on which it is based, in light of new evidence that private equity buyers have higher rates of bankruptcy, engage in risky strategies that jeopardize long-term viability of companies, and, even when successful, tend to have a concentrative effect on industries, either by design or inadvertence.²²¹ In addition, just as current DOJ and FTC merger analysis takes into account the “maverick” status of one of the merging parties, the agencies should consider taking account of the “anti-maverick” nature of private equity managed companies in merger analysis.²²²

- **Develop theory for addressing accretive acquisitions. The private equity model of adding on to a platform company through a series of (often) small acquisitions is that, even if none of the individual acquisitions significantly impacts market concentration or increases market power, the acquisitions collectively have significant competitive impact.** The antitrust agencies’ current approach to merger analysis focuses only on one acquisition at a time, allowing these accretive mergers to fly under the antitrust radar.²²³ This issue is not limited to private equity in healthcare, but also presents a serious issue in reviewing mergers generally and particularly in technology industries. In addition to the proposed change to the HSR reporting requirements discussed above, the agencies should continue and expand efforts to develop merger theories and approaches that can capture and address the competitive threat posed by such accretive mergers.
- **Incorporate financial risk analysis in healthcare mergers. One of private equity’s defining characteristics is an outsized appetite for a specific type of risk: risk to the long-term**

²¹⁸ Antitrust Division U.S. Department of Justice. (2020, September). *Merger Remedies Manual*, at 24.

<https://www.justice.gov/atr/page/file/1312416/download>

²¹⁹ It bears noting that the FTC, which usually takes the lead on healthcare mergers, did not join this guidance. And, although the DOJ cites an FTC study as the basis for its recommendation, the study itself does not clearly support DOJ’s position. It says only that in evaluating divestiture buyers, “[t]he Commission examines any outside sources of funds, including private equity and investment firms, and the extent of their involvement and financial commitment.” It does say, “[t]he study revealed that there were cases where the buyer’s flexibility in investment strategy, commitment to divestiture, and willingness to invest more when necessary were important to the success of the remedy. But it does not connect this statement to private equity in any direct way.

²²⁰ Private equity may benefit from the comparison to hospitals and pharmaceutical companies as the current alternative buyers in these markets, as both groups pose significant competition problems of their own. Richman, B. D. (2007). Antitrust and Nonprofit Hospital Mergers: A Return to Basics. *University of Pennsylvania Law Review* 156, 121-150; Melnick, G. A., & Fonkych, K. (2016). Hospital Prices Increase in California, Especially Among Hospitals in the Largest MultiHospital Systems. *INQUIRY: The Journal of Health Care, Organization, Provision, and* 53: 1-7; We agree that the private equity alternatives are highly problematic and, in part for that reason, do not suggest that private equity has no benefits or should be banned from healthcare. But, we do reject the idea that private equity is the competition solution in healthcare, highlight areas of significant concern, and suggest ways those concerns can be better understood, mitigated, and addressed.

²²¹ Both the Federal Trade Commission study and the Department of Justice guidance suffer from other significant flaws, as well. For a thoughtful discussion of some of the issues with the Federal Trade Commission study, see Kwoka, J. Controlling Mergers and Market Power: A Program for Reviving Antitrust in America; Competition Policy International (2020), Appendix B: Comments on the FTC Remedies Study.

²²² See Gandhi at 5-6 and fn. 6 and 7 (collecting sources advocating for consideration of firms’ relative sensitivities to competitive conditions in merger analysis).

²²³ *Ibid* on accretive mergers.

viability of the portfolio company. As discussed in Section VI.A, the financial structure of private equity deals creates a moral hazard that causes the private equity owners to undervalue the cost of this type of risk. Currently, however, merger analysis by the antitrust agencies does not take this financial risk into account. Because this financial risk has significant implications for competition, to overlook it is a mistake. Medium-to-long-term stability in markets is necessary to foster an environment conducive to effective competition. Particularly in healthcare markets, where competition is already fragile, this is a pressing concern. When evaluating divestiture buyers, the agencies already take the proposed buyer's financial risk and strategy into account. They should do the same when evaluating the competitive impacts of healthcare mergers, particularly when private equity financing of the buyer is involved. To the extent private equity firms claim efficiencies from a proposed merger, those efficiencies should be evaluated in light of the fact that, if the company becomes insolvent or too heavily burdened by debt, it will not be able to realize these benefits.²²⁴

- **Develop guidance for practitioners on ethics of private equity sales. The American Medical Association (“AMA”) and other organizations that provide guidance to practitioners have a significant role here, as well.** Awareness of the role of private equity in healthcare is growing, and the AMA has acknowledged the issue.²²⁵ But, specific guidance is needed to direct practitioners about the types of financial arrangements and funding models that lead to unacceptable compromises in patient care and leave them with misaligned incentives to put profits above patient care.
- **Conduct 6(b) study of private equity in healthcare.** Perhaps the clearest take-away from our review of private equity in healthcare markets is that not nearly enough is known about the impact of private equity on healthcare markets. Accordingly, we strongly recommend the FTC include examination of the role of private equity firms in its recently-announced working group to reexamine its approach to pharmaceuticals and its recently launched a 6(b) study directed at acquisitions of healthcare providers generally. We encourage the FTC to specifically include examination of acquisitions and investments by private equity funds and other non-traditional business models in that study.

²²⁴ Moss, D. L. (2007, December 7). *Texas Pac. Grp. Capital & Northwest Airlines Proposed Acquisition of Midwest Airlines*. [White Paper]. American Antitrust Institute. (discussing ways in which private equity deal structure can impact efficiencies analysis in the context of airline acquisition).

²²⁵ The American Medical Association. (2019, July). Report of the Council on Medical Service. <https://www.ama-assn.org/system/files/2019-07/a19-cms-report-11.pdf>

BIBLIOGRAPHY

- A.B. 47, 81st Leg., 81st (2021) Sess. (NV. 2020), <https://legiscan.com/NV/bill/AB47/2021>
- Abdnor, Amy & Spratt, Alexandra. (2020, September 8). Hotspots for COVID Deaths, Nursing Homes Have Long Been Targeted—And Gutted—By Private Equity. Arnold Foundation. <https://www.arnoldventures.org/stories/hotspots-for-covid-deaths-nursing-homes-have-long-been-targeted-and-gutted-by-private-equity/>
- <https://www.arnoldventures.org/stories/hotspots-for-covid-deaths-nursing-homes-have-long-been-targeted-and-gutted-by-private-equity/>
- Adler, L, Hannick, K., Lee, S. (2020, October 13). High air ambulance charges concentrated in private equity-owned carriers. Brookings. <https://www.brookings.edu/blog/usc-brookings-schaeffer-on-health-policy/2020/10/13/high-air-ambulance-charges-concentrated-in-private-equity-owned-carriers/>
- Advanced Dermatology. (2016, September 19). Advanced Dermatology News Updates & Blog | Dr. Matt Leavitt Profiled in Orlando Business Journal. <https://www.advancedderm.com/about-us/news/dr-matt-leavitt-profiled-in-orlando-business-journal>
- An Act Concerning Notice of Acquisitions, Joint Ventures, Affiliations of Group Medical Practices and Hospital Admissions, Medical Foundations and Certificates of Need, P.A 14-168. (2014). <https://www.cga.ct.gov/2014/act/pa/2014PA-00168-R00SB-00035-PA.htm>
- Antitrust Division U.S. Department of Justice. (2020, September). pp. 1-38, Merger Remedies Manual. <https://doi.org/10.36687/inetwp118>
- Ardent Health Services. About Ardent. (n.d.). Retrieved March 26, 2021, from <https://ardenthealth.com/about/about-us>
- Ardent Health Services. . Ardent Health Services And LHP Hospital Group, Inc. Announce Plans To Merge. <https://ardenthealth.com/ardent-health-services-and-lhp-hospital-group-inc-announce-plans-merge>
- Alexander, L. (2020, August). Countervailing Power. AAI White Paper.
- AlpInvest. . About us. Retrieved March 24, 2021, from <https://www.alpinvest.com/about-us>
- Ardent Health Services. Our History. (n.d.). Retrieved March 26, 2021, from <https://ardenthealth.com/about/our-history>
- Arnold Foundation. <https://www.arnoldventures.org/stories/part-1-in-pursuit-of-profit-private-equity-expanded-into-health-care-the-results-raise-concerns-about-cost-and-quality/>
- Arnsdorf, I. (2020, April 3). Overwhelmed Hospitals Face a New Crisis: Staffing Firms are Cutting Their Doctors' Hours and Pay. ProPublica. Retrieved March 27, 2021, from <https://www.propublica.org/article/overwhelmed-hospitals-face-a-new-crisis-staffing-firms-are-cutting-their-doctors-hours-and-pay>
- Arnsdorf, I. (2020, April 20). Medical Staffing Companies Cut Doctors' Pay While Spending Millions on Political Ads. ProPublica. Retrieved March 26, 2021, from <https://www.propublica.org/article/medical-staffing-companies-cut-doctors-pay-while-spending-millions-on-political-ads>
- Appelbaum, E., & Batt, R. (2020). Private Equity Buyouts in Healthcare: Who Wins, Who Loses? Institute for New Economic Thinking Working Paper Series, 1–115. <https://doi.org/10.36687/inetwp118>
- Appelbaum, E., & Batt, R. (2014). Private Equity at Work: When Wall Street Manages Main Street. Russell Sage Foundation.

- Appleby, J. (2020, December 22). Congress Acts To Spare Consumers From Costly Surprise Medical Bills. NPR.Org. <https://www.npr.org/sections/health-shots/2020/12/22/949047358/congress-acts-to-spare-consumers-from-costly-surprise-medical-bills>
- Audax Private Equity. (2016, May 18). Harvest Partners and Audax Announce Recapitalization of Advanced Dermatology. <https://www.audaxprivateequity.com/news/harvest-partners-and-audax-announce-recapitalization-of-advanced-dermatology>
- Audax Private Equity. (n.d.). Overview. (n.d.). Retrieved March 26, 2021, from <https://www.audaxprivateequity.com/>
- Austin, D. R., & Baker, L. C. (2015). Less Physician Practice Competition Is Associated With Higher Prices Paid For Common Procedures. *Health Affairs*, 34(10), 1753–1760. <https://doi.org/10.1377/hlthaff.2015.0412>
- Azar, J. (2012, May). A New Look at Oligopoly: Implicit Collusion Through Portfolio Diversification, Market Power, and the Theory of the Firm.
- Azar, J. (2017, September 22). Portfolio Diversification, Market Power, and the Theory of the Firm (2016), unpublished manuscript.
- Azar, J., Schmalz, M. C., & Tecu, I. (2018, May 10). Anticompetitive Effects of Common Ownership (SSRN Scholarly Paper ID 2427345). Social Science Research Network. <https://doi.org/10.2139/ssrn.2427345>
- Bailey, J. (2003, February 25). Why It May Pay to Buy Before Selling the Firm. *WSJ*. <https://www.wsj.com/articles/SB1046114229349870943>
- Baker, J. B. (2016). Overlapping Financial Investor Ownership, Market Power, and Antitrust Enforcement: My Qualified Agreement with Professor Elhauge. 129 *Harv. L. Rev. F.* 212
- Batt, R., & Appelbaum, E. (2019, September 9). Private Equity Tries to Protect Another Profit Center—The American Prospect. <https://prospect.org/power/private-equity-tries-protect-another-profit-center/>
- Bell, J. (2019, July 29). Teva, Endo among generics paying \$70M in California pay-for-delay settlement. (n.d.). *BioPharma Dive*. Retrieved March 24, 2021, from <https://www.biopharmadive.com/news/california-generics-settlement-teva-endo-Teikoku-pay-for-delay/559756/>
- Beltran, L. (2015, May 19). Par Pharma sale to produce seven-fold return for TPG in less than 3 years [Content]. *PE Hub*. <https://www.pehub.com/par-pharma-sale-to-produce-seven-fold-return-for-tpg-in-less-than-3-years/>
- Borsa, A., Bruch, J., & Richardson, S. S. (2020, September 14). When private equity firms invest in women's health clinics, who benefits? *STAT*. <https://www.statnews.com/2020/09/14/private-equity-firms-invest-womens-health-clinics-who-benefits/>
- Bos, A., & Harrington, C. (2017). What Happens to a Nursing Home Chain When Private Equity Takes Over? A Longitudinal Case Study. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*, 54, 0046958017742761. <https://doi.org/10.1177/0046958017742761>
- Bose, U., MacDonald, R., & Tsoukas, S. (2019). Policy initiatives and firms' access to external finance: Evidence from a panel of emerging Asian economies. *Journal of Corporate Finance*, 59, 162–184. <https://doi.org/10.1016/j.jcorpfin.2016.09.008>
- Brand, K. & Rosenbaum, T. (2019). A Review of the Economic Literature on Cross-Market Mergers. *Antitrust L.J.* 533, 535-36.

- Braun, R. T., Bond, A. M., Qian, Y., Zhang, M., & Casalino, L. P. (2021). Private Equity In Dermatology: Effect On Price, Utilization, And Spending. *Health Affairs*, 40(5), 727–735. <https://doi.org/10.1377/hlthaff.2020.02062>
- Braun, R. T., Yun, H., Casalino, L. P., Myslinski, Z., Kuwonzza, F. M., Jung, H.-Y., & Unruh, M. A. (2020). Comparative Performance of Private Equity–Owned US Nursing Homes During the COVID-19 Pandemic. *JAMA Network Open*, 3(10), e2026702. <https://doi.org/10.1001/jamanetworkopen.2020.26702>
- Bruch, J. D., Borsa, A., Song, Z., & Richardson, S. S. (2020, August 24). Expansion of Private Equity Involvement in Women’s Health Care. *JAMA Internal Medicine*, 180(11), 1542–1545. <https://doi.org/10.1001/jamainternmed.2020.3567>
- Bruch, J. D., Gondi, S., & Song, Z. (2020). Changes in Hospital Income, Use, and Quality Associated with Private Equity Acquisition. *JAMA Internal Medicine*, 180(11), 1428–1435. https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2769549?guestAccessKey=87f981c4-d66d-4901-b869-43f3489dfb8a&utm_source=For_The_Media&utm_medium=referral&utm_campaign=ftm_links&utm_content=tf&utm_term=082420
- Bruch, J., Zeltzer, D., & Song, Z. (2021). Characteristics of Private Equity–Owned Hospitals in 2018. *Annals of Internal Medicine*, 174(2), 277–279. <https://doi.org/10.7326/M20-1361>
- Business Wire. (2015, April 4). Ventas and Equity Group Investments Announce Completion of Ardent Transactions. <https://www.businesswire.com/news/home/20150804006878/en/Ventas-Equity-Group-Investments-Announce-Completion-Ardent>
- Business Wire. (2015, April 6). Ventas to Acquire Ardent Health Services for \$1.75 Billion. <https://www.businesswire.com/news/home/20150406005245/en/Ventas-to-Acquire-Ardent-Health-Services-for-1.75-Billion>
- Butler, K. & Perlberg, H. (2020, January 31). U.S. Dermatology Defaults on \$377 Million Direct Lender Loan. *Bloomberg.Com*. <https://www.bloomberg.com/news/articles/2020-01-31/u-s-dermatology-defaults-on-377-million-direct-lender-loan>
- Buzz, B. D. C. (2020, February 13). CGBD Article Preview & Why I Sold. *BDC BUZZ*. <https://www.bdcbuzz.com/2020/02/13/cgbd-12-7-yield-trading-17-below-book-why-i-sold/>
- Capps, C., Dranove, D., & Ody, C. (2017, September). Physician Practice Consolidation Driven by Small Acquisitions, So Antitrust Agencies Have Few Tools to Intervene. *Health Affairs*, 36(9), 1556–1563. <https://doi.org/10.1377/hlthaff.2017.0054>
- Casalino, L. P., Saiani, R., Bhidya, S., Khullar, D., & O’Donnell, E. (2019, January 15). Private Equity Acquisition of Physician Practices. *Annals of Internal Medicine*, 170(2), 114–115. <https://doi.org/10.7326/M18-2363>
- Cate, M. (2001, July 8). Welsh Carson puts \$145 million into venture. *Nashville Business Journal*. <https://www.bizjournals.com/nashville/stories/2001/07/09/story7.html>
- Caves, K. W., & Singer, H. J. (2018). When the Econometrician Shrugged: Identifying and Plugging Gaps in the Consumer Welfare Standard (SSRN Scholarly Paper ID 3205518). *Social Science Research Network*. <https://papers.ssrn.com/abstract=3205518>
- Cawley, J., Grabowski, D. C., & Hirth, R. A. (2006). Factor substitution in nursing homes. *Journal of Health Economics*, 25(2), 234–247. <https://doi.org/10.1016/j.jhealeco.2005.06.004>

- Centers for Medicare & Medicaid Services. National Health Expenditure Projections 2018-2027. <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/ForecastSummary.pdf>
- Centers for Medicare & Medicaid Services. (n.d.). NHE Fact Sheet | CMS. Retrieved May 1, 2021, from <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NHE-Fact-Sheet>
- Champagne, D., Davidson, A., Littlejohns, J., & Podpolny, D. (2019, May 23). Private equity opportunities in healthcare tech | McKinsey. <https://www.mckinsey.com/industries/private-equity-and-principal-investors/our-insights/private-equity-opportunities-in-healthcare-tech#>
- Chen, E. M., Cox, J. T., Begaj, T., Armstrong, G. W., Khurana, R. N., & Parikh, R. (2020). Private Equity in Ophthalmology and Optometry: Analysis of Acquisitions from 2012 through 2019 in the United States. *Ophthalmology*, 127(4), 445–455. <https://doi.org/10.1016/j.ophtha.2020.01.007>
- Clayton Act, 15 U.S.C. §§ 12-27 (1914).
- Coldiron, B. M. (2017, November 17). Well I Figured It Out...I Owe My Soul to the Company Store. MDedge Dermatology.
- Comments of the American Antitrust Institute to the Federal Trade Commission on Project No. P110014, <https://www.antitrustinstitute.org/wp-content/uploads/2021/02/2021-02-01-AAI-Comments-on-HSR-NPRM-2-1-FINALR.pdf>.
- Commercial Sector Prices Team. (2020, September 07). Part 1: In Pursuit of Profit, Private Equity Expanded into Health Care. The Results Raise Concerns about Cost and Quality. Arnold Ventures. Retrieved March 23, 2021, from <https://www.arnoldventures.org/stories/part-1-in-pursuit-of-profit-private-equity-expanded-into-health-care-the-results-raise-concerns-about-cost-and-quality/>
- Complaint, People of the State of California ex rel. Xavier Becerra, v. Sutter Health, SUPERIOR COURT OF THE STATE OF CALIFORNIA, CGC-14-538451. Consolidated with CGC-18-565398 (July 9, 2020), https://oag.ca.gov/system/files/attachments/press_releases/Sutter%20Complaint.pdf
- Consolidated Appropriations Act, H.R. 133, 116th Cong. (2020). <https://www.congress.gov/116/bills/hr133/BILLS-116hr133enr.pdf>
- Cooper, Z. (n.d.). Estimating the Impact of Private Equity Investment on Health Care Providers' Behavior | Department of Economics. Yale University. Retrieved April 2, 2021, from <https://economics.yale.edu/undergraduate/sro/summer-2020/estimating-impact-private-equity-investment-health-care-providers>
- Cooper, Z., Craig, S. V., Gaynor, M., & Van Reenen, J. (2019). The Price Ain't Right? Hospital Prices and Health Spending on the Privately Insured*. *The Quarterly Journal of Economics*, 134(1), 51–107. <https://doi.org/10.1093/qje/qjy020>
- Cooper, Z, Morton, F. S., & Shekita, N. (2018, March). Surprise! Out-of-Network Billing for Emergency Room Services in the U.S. Yale Univ. Working Paper. https://isps.yale.edu/sites/default/files/publication/2018/03/20180305_oon_paper2_tables_appendices.pdf
- Cooper, Z. [@zachcooperYale]. (2021, April 8). There aren't systemic fixes that would address all of these problems. We need to play whack-a-mole and keep fighting to reform each sector. This is where politics intersects with healthcare. Passing laws are tough and these firms can lobby hard [Tweet]. Twitter. <https://twitter.com/zackcooperYale/status/1380155617885700099>

- Dafny, L., Ho, K., & Lee, R. S. (2019). The price effects of cross-market mergers: Theory and evidence from the hospital industry. *The RAND Journal of Economics*, 50(2), 286–325. <https://doi.org/10.1111/1756-2171.12270>
- Donian, A. (2021, February 9). [Updated] The Top 10 Largest Home Health, Hospice Providers in 2020. *Home Health Care News*. <https://homehealthcarenews.com/2021/02/the-top-10-largest-home-health-hospice-providers-in-2020/>
- Dunn, A., & Shapiro, A. H. (2014). Do Physicians Possess Market Power? *The Journal of Law and Economics*, 57(1), 159–193. <https://doi.org/10.1086/674407>
- Eills, A. (2019, August 16). Private equity's role in the future of healthcare. *NH Business Review*. <https://www.nhbr.com/private-equitys-role-in-the-future-of-healthcare/>
- Elara Caring. (n.d.). Elara Caring. Elara Caring - About Us. <https://elara.com/about-us/>
- Endo International plc. (2015, September 28). Endo Completes Acquisition of Par Pharmaceutical and Provides Financial Guidance. Retrieved March 24, 2021, from <https://investor.endo.com/news-releases/news-release-details/endo-completes-acquisition-par-pharmaceutical-and-provides>
- Endo International plc. (2015, May 18). Endo to Acquire Par Pharmaceutical, Strategically Expanding Generics Business to a Top 5 Industry Leader. Retrieved March 24, 2021, from <https://investor.endo.com/news-releases/news-release-details/endo-acquire-par-pharmaceutical-strategically-expanding-generics>
- Equity Group Investments. (n.d.). Ardent Financial Restructuring and Growth Platform. Retrieved March 26, 2021, from <https://www.egzell.com/wp-content/uploads/2020/12/Ardent-financial-restructuring-and-growth-platform-healthcare.pdf>
- Farmer, B. (2019, May 13). Study: Nashville's For-Profit Hospital Systems Are Among The Most Expensive. *WPLN News - Nashville Public Radio*. <https://wpln.org/post/study-nashvilles-for-profit-hospital-systems-are-among-the-most-expensive/>
- Federal Trade Commission. (2017, January 23). Endo Pharmaceuticals Inc. Agrees to Abandon Anticompetitive Pay-for-Delay Agreements to Settle FTC Charges; FTC Refiles Suits Against Generic Defendants. <https://www.ftc.gov/news-events/press-releases/2017/01/endo-pharmaceuticals-inc-agrees-abandon-anticompetitive-pay-delay>
- Federal Trade Commission. (2021, March 15). FTC Announces Multilateral Working Group to Build a New Approach to Pharmaceutical Mergers. <https://www.ftc.gov/news-events/press-releases/2021/03/ftc-announces-multilateral-working-group-build-new-approach>
- Federal Trade Commission. (2015, October 15). Keystone Orthopaedic Specialists, LLC, and Orthopaedic Associates of Reading, Ltd., In the Matter of. <https://www.ftc.gov/enforcement/cases-proceedings/141-0025/keystone-orthopaedic-specialists-llc-orthopaedic-associates>
- Federal Trade Commission. (2020, July 8). Statement of Commissioner Rohit Chopra. https://www.ftc.gov/system/files/documents/public_statements/1577783/p110014hsrannualreportc_hoprastatement.pdf
- Federal Trade Commission. *The FTC's Merger Remedies 2006-2012: A Report of the Bureau of Competition and Economics*. (2017, January). https://www.ftc.gov/system/files/documents/reports/ftcs-merger-remedies-2006-2012-report-bureau-competition-economics/p143100_ftc_merger_remedies_2006-2012.pdf
- Federal Trade Commission v. Sanford Health, No. 1:17-CV-133, 2017 WL 10810016(D.N.D. 2017)

- Federal Trade Commission v. St. Luke's Health System Ltd., Saint Alphonsus Med. Ctr.-Nampa Inc. v. St. Luke's Health Sys., Ltd., 778 F.3d 775 (9th Cir. 2015).
- Flaherty, S. (2012, October 16). Watson Gets FTC Nod For \$5.5B Actavis Buy, With Concessions. *Law 360*.
- Gandhi, A., Song, Y., & Upadrashta, P. (2020). Have Private Equity Owned Nursing Homes Fared Worse Under COVID-19? *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3682892>
- Gaynor, M. (2020, March). What To Do about Health-Care Markets? Policies to Make Health-Care Markets Work?. *Brookings Institution Working Paper*.
- Gilligan, H. T. (2021, April 12). Study: Higher Death Rates and Taxpayer Costs at Nursing Homes Owned by Private Equity. *California Health Care Foundation*. <https://www.chcf.org/blog/higher-death-rates-costs-nursing-homes-private-equity/>
- Ginsburg, P.B., de Loera-Brust, A., Brandt, C., & Durak, A. (2018, November 1). The Opportunities and Challenges of Data Analytics in Health Care. *Brookings*. <https://www.brookings.edu/research/the-opportunities-and-challenges-of-data-analytics-in-health-care/>
- Gitterman, D. P., Weiner, B. J., Domino, M. E., McKethan, A. N., & Enthoven, A. C. (2003). The rise and fall of a Kaiser Permanente expansion region. *The Milbank quarterly*, 81(4), 567–601. <https://doi.org/10.1046/j.0887-378x.2003.00295.x>.
- Gondi, S., & Song, Z. (2019, February 28). Potential Implications of Private Equity Investments in Health Care Delivery. *JAMA*, 321(11), 1047. <https://doi.org/10.1001/jama.2019.1077>
- Gottfried, M., & Dummett, B. (2021, April 21). Private-Equity Firms Regain Taste for Giant Buyouts. *Wall Street Journal*. <https://www.wsj.com/articles/private-equity-firms-regain-taste-for-giant-buyouts-11618997580>
- Gottfried, M., & Lombardo, C. (2021, February 11). Apollo's Lifepoint in Talks to Buy Ardent Health Services. *Wall Street Journal*. <https://www.wsj.com/articles/apollo-s-lifepoint-in-talks-to-buy-ardent-health-services-1161306159999>
- Greaney, T. L. (2020, September 8). Surprise Billing: A Window into the U.S. Health Care System. https://www.americanbar.org/groups/crsj/publications/human_rights_magazine_home/health-matters-in-elections/surprise-billing/
- Gupta, A., Howell, S. T., Yannelis, C., & Gupta, A. (2021, February). Does Private Equity Investment in Healthcare Benefit Patients? Evidence from Nursing Homes (No. w28474). *National Bureau of Economic Research*. <https://doi.org/10.3386/w28474>
- Gustafsson, L., Seervai, S., & Blumenthal, D. (2019, October 29). The Role of Private Equity in Driving-up Health Care Prices. *Harvard Business Review*. <https://hbr.org/2019/10/the-role-of-private-equity-in-driving-up-health-care-prices>
- Hafner, K. & Palmer, G. (2020, September 22). Skin Cancers Rise, Along With Questionable Treatments. *The New York Times*.
- Harrington, C., Olney, B., Carrillo, H., & Kang, T. (2012). Nurse Staffing and Deficiencies in the Largest For-Profit Nursing Home Chains and Chains Owned by Private Equity Companies. *Health Serv Res.*, 47(1), 106-128. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3447240/#__ffn_secitle
- Harvest Partners. (n.d.). *Advanced Dermatology & Cosmetic Surgery*. Retrieved March 26, 2021, from <https://www.harvestpartners.com/advanced-dermatology-cosmetic-surgery>
- Health care system consolidation: Attorney General approval and enforcement act, Senate SB-977. (2020). https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201920200SB977

- Horwitz, J. R. (2005). Making Profits And Providing Care: Comparing Nonprofit, For-Profit, And Government Hospitals. *Health Affairs*, 24(3), 790–801. <https://doi.org/10.1377/hlthaff.24.3.790>
- Hosp. Corp. of Am. v. Federal Trade Commission, 807 F.2d 1381, 1388 (7th Cir. 1986)
- Hospital or Group Practice Mergers, Acquisitions, and Other Transaction, H.B. 1243. (2019). <https://www.flssenate.gov/Session/Bill/2019/01243>
- Huang, S. S., & Bowblis, J. R. (2019). Private equity ownership and nursing home quality: An instrumental variables approach. *International Journal of Health Economics and Management*, 19(3), 273–299. <https://doi.org/10.1007/s10754-018-9254-z>
- Humphreys, A. (2020, February 20). What will private equity investment in healthcare look like in 2020? *MedCity News*. <https://medcitynews.com/2020/02/what-will-private-equity-investment-in-healthcare-look-like-in-2020/>
- Indeed. (n.d.). Elara Caring. <https://www.indeed.com/cmp/Elara-Caring>
- Kennedy, J. (2015, March 23). Tenet, USPI to Combine Outpatient and Short-Stay Centers. *Law360*.
- Kiernan, K. (2014, May 12). Rising Star: Willkie Farr's Robert Langdon. *Law 360*.
- Kliff, S., & Sanger-Katz, M. (2020, December 21). Surprise Medical Bills Cost Americans Millions. Congress Finally Banned Most of Them. *The New York Times*. <https://www.nytimes.com/2020/12/20/upshot/surprise-medical-bills-congress-ban.html>
- Koch, T. & Ulrick, Shawn W. (2017, August). Price Effects of a Merger: Evidence from a Physician's Market. U.S. Federal Trade Commission. <https://www.ftc.gov/reports/price-effects-merger-evidence-physicians-market>
- Koenig, B. (2019, Dec 20). Sutter Health, Calif. AG Antitrust Deal Valued at \$575M. *Law360*.
- Law 360. (2007, July 30). CMS Creates Uncertainty with Proposed Changes.
- Law 360. (n.d.). FTC Says Endo, Impax Cut 2nd Opana ER Pay-For-Delay Deal—Law360. Retrieved March 24, 2021, from <https://www.law360.com/articles/1348411/ftc-says-endo-impax-cut-2nd-opana-er-pay-for-delay-deal>
- Lokey, H. (n.d.). Palladium Equity Acquisition of Jordan Health Services. Houlihan Lokey Advises Jordan Health Services. <https://hl.com/about-us/transactions/transaction-detail/12884903227/>
- Margulies, M. (2018, May 17). Jordan Health Services Has Been Acquired by Kelso & Company and Blue Wolf Capital Partners. *Cain Brothers*. <https://www.cainbrothers.com/transactions/jordan-health-services-has-been-acquired-by-kelso-company-and-blue-wolf-capital-partners/>
- Miller, J. (2020, June 9). Private Equity's Growing Role in the Biopharma Industry. *ValueChain Insights*.
- Melnick, G. A., & Fonkych, K. (2016). Hospital Prices Increase in California, Especially Among Hospitals in the Largest MultiHospital Systems. *INQUIRY* 53, 1, 5.
- Menzies. (2016). The Compounding Effect of Size on Business Value. <https://www.menzies.co.uk/wp-content/uploads/2016/01/27The-Compounding-Effect-of-Size-on-Business-Value27-Rebranded.pdf>
- Meyer, H. (2019, August 31). Physician groups crave capital but worry about future sale. *Modern Healthcare*. <https://www.modernhealthcare.com/physicians/physician-groups-crave-capital-worry-about-future-sale>
- Moody's Investors Service. (2018, June 8). Rating Action: Moody's assigns Caa2 to AHP Health Partners notes offering, existing ratings. affirmed. <https://www.moody's.com/research/Moodys-assigns-Caa2-to-AHP-Health-Partners-notes-offering-existing-->

PR_384986#:~:text=New%20York%2C%20June%2008%2C%202018,Partners%2C%20LLC%20(Arden t).

- Moore, R. (2005, March 11). Psych Solutions buying Ardent behavioral sites. Nashville Business Journal. <https://www.bizjournals.com/nashville/stories/2005/03/07/daily35.html>
- Moss, D. L. (2020, March 31). Can Competition Save Lives? The Intersection of COVID-19, Ventilators, and Antitrust Enforcement. American Antitrust Institute. <https://www.antitrustinstitute.org/work-product/can-competition-save-lives-the-intersection-of-covid-19-ventilators-and-antitrust-enforcement/>
- Moss, D. L. (2020, September 3). pp. 1–21, From Competition to Conspiracy: Assessing the Federal Trade Commission's Merger Policy in the Pharmaceutical Sector.
- Moss, D. L. (2007, December 7). Texas Pac. Grp. Capital & Northwest Airlines Proposed Acquisition of Midwest Airlines. White Paper, American Antitrust Institute.
- Moss, D. L. (2020, November 4). What Does Expanding Horizontal Control Mean for Antitrust Enforcement? A Look at Mergers, Partial Ownership, and Joint Ventures. White Paper, American Antitrust Institute. https://www.antitrustinstitute.org/wp-content/uploads/2020/11/Moss_Horizontal-Control_11.4.20.pdf.
- Mullaney, T. (2018, April 10). Great Lakes, Jordan, National Home Health Merge to Create Powerhouse Provider. Home Health Care News. <https://homehealthcarenews.com/2018/04/great-lakes-jordan-national-home-health-merge-to-create-powerhouse-provider/>
- Mullaney, T. (2018, July 17). Jordan, Great Lakes, National Home Health Rebrand as Elara Caring. Home Health Care News. <https://homehealthcarenews.com/2018/07/jordan-great-lakes-national-home-health-rebrand-as-elara-caring/>
- Nashville Health Care Council. (n.d.). Nashville: The Health Care Industry Capital. Retrieved April 8, 2021, from <https://healthcarecouncil.com/nashville-health-care-industry/>
- Naso, C. (2017, January 9). UnitedHealth Group Nabs Surgical Care Co. in \$2.3B Deal. Law360. <https://www.law360.com/articles/878671/unitedhealth-group-nabs-surgical-care-co-in-2-3b-deal>
- No Surprises Act, H.R. 3630, 116th Cong. (2020).
- Notice of Proposed Rulemaking. (Proposed December 1, 2020). Premerger Notification; Reporting and Waiting Period Requirements, 85 Fed. Reg. 77,053, 77,055 n.1
- O'Donnell, E. M., Lelli, G. J., Bhidya, S., & Casalino, L. P. (2020, June). The Growth Of Private Equity Investment In Health Care: Perspectives From Ophthalmology. Health Affairs (Project Hope), 39(6), 1026–1031. <https://doi.org/10.1377/hlthaff.2019.01419>
- Offodile II, A. C., Cerullo, M., Bindal, M., Rauh-Hain, J. A., & Ho, V. (2021, May). Private Equity Investments In Health Care: An Overview Of Hospital And Health System Leveraged Buyouts, 2003–17. Health Affairs, 40(5), 719–726. <https://doi.org/10.1377/hlthaff.2020.01535>
- Or, A. (2016, May 18). Abry Partners to Buy Candescant Partners' Dermatology Associates of Tyler for Over \$300 Million. Wall Street Journal. <https://www.wsj.com/articles/abry-partners-to-buy-candescant-partners-dermatology-associates-of-tyler-for-over-300-million-1463571003>
- Palladium Equity. (n.d.). Value Creation - GOL. Palladium Equity Partners. <https://www.palladiumequity.com/gol/>
- Parker, J. (2020, December 22). AccentCare, Seasons Hospice Complete Merger. Hospice News. <https://hospicenews.com/2020/12/22/accentcare-seasons-hospice-complete-merger/>

- Parker, J. (2020, June 24). COVID is Delaying Private Equity Hospice Transactions. Hospice News. <https://hospicenews.com/2020/06/24/covid-is-delaying-private-equity-hospice-transactions/>
- Parker, W. (2021, April 28). Biden Proposal Would Close Longtime Real-Estate Tax Loophole. Wall Street Journal. <https://www.wsj.com/articles/biden-proposal-would-close-longtime-real-estate-tax-loophole-11619647044>
- Perlberg, H. (2020, May 20). How Private Equity Is Ruining American Health Care. Bloomberg.Com. <https://www.bloomberg.com/news/features/2020-05-20/private-equity-is-ruining-health-care-covid-is-making-it-worse>
- Pharmacy Times. (2016, August 25). Par Pharmaceutical. Retrieved March 24, 2021, from <https://www.pharmacytimes.com/view/par-pharmaceutical>
- Pifer, R. (2018, October 17). Insurers see broad market opportunities with end-of-life care. Healthcare Dive. <https://www.healthcaredive.com/news/insurers-see-broad-market-opportunities-with-end-of-life-care/532900/>
- PitchBook. (n.d.). Advanced Dermatology and Cosmetic Surgery Profile. PitchBook. Retrieved April 7th, 2021 from <https://www.pitchbook.com>
- PitchBook. (n.d.). Ardent Health Services Profile. PitchBook. Retrieved February 12, 2021 from <https://www.pitchbook.com>
- Pitchbook. (n.d.). Jordan Health Services. <https://my.pitchbook.com/profile/12072-97/company/profile#investments>
- Pitchbook. (n.d.). Refresh Mental Health. <https://my.pitchbook.com/profile/222514-30/company/profile#investments>
- Posner, E. A., Morton, F. S., & Weyl, E. Glen. (2017, March 22). A Proposal to Limit the Anti-Competitive Power of Institutional Investors, Working Paper.
- Pradhan, R., Weech-Maldonado, R., Harman, J. S., Al-Amin, M., & Hyer, K. (n.d.). Private Equity Ownership of Nursing Homes: Implications for Quality. 14.
- PR Newswire. . Advanced Dermatology and Cosmetic Surgery Announces the Acquisition of Colorado Dermatology Specialists. <https://www.prnewswire.com/news-releases/advanced-dermatology-and-cosmetic-surgery-announces-the-acquisition-of-colorado-dermatology-specialists-301185267.html>
- PR Newswire. (2020, October 1). Advanced Dermatology and Cosmetic Surgery Announces the Acquisition of Dermatology Associates of Montgomery. <https://www.prnewswire.com/news-releases/advanced-dermatology-and-cosmetic-surgery-adcs-clinics-announces-the-acquisition-of-dermatology-associates-of-montgomery-301143843.html>
- PR Newswire. (2020, December 3). Advanced Dermatology and Cosmetic Surgery Announces the Acquisition of Nielsen Dermatology. <https://www.prnewswire.com/news-releases/advanced-dermatology-and-cosmetic-surgery-announces-the-acquisition-of-nielsen-dermatology-301185392.html>
- PR Newswire. (n.d.). Par Pharmaceutical to Acquire JHP Pharmaceuticals. Retrieved March 24, 2021, from <https://www.prnewswire.com/news-releases/par-pharmaceutical-to-acquire-jhp-pharmaceuticals-241264801.html>
- Relman, A.S., & Reinhardt U.E. (1986), Debating for-profit healthcare and the ethics of physicians. Health Aff (Millwood), 5(2), 5–31. <https://doi.org/10.1377/hlthaff.5.2.5>.

- Resneck, J. S., Jr. (2018). Dermatology Practice Consolidation Fueled by Private Equity Investment: Potential Consequences for the Specialty and Patients. *JAMA Dermatology*, 154(1), 13–14. <https://doi.org/10.1001/jamadermatol.2017.5558>
- Richman, B. D. (2007). Antitrust and Nonprofit Hospital Mergers: A Return to Basics. *University of Pennsylvania Law Review*, 156, 121-150.
- S.B. 329, 81st Leg., 81st (2021) Sess. (NV. 2021), <https://www.leg.state.nv.us/App/NELIS/REL/81st2021/Bill/7964/Overview>
- Schuller, K. A., Cronin, C. E., Nicks, S. E., Jing, X., Kingori, C., & Morrone, M. (2019). Development and application of a rubric to compare strategies for improving access to healthcare in rural communities in the United States. *Elsevier*, 74, 61–68. <https://doi.org/10.1016/j.evalprogplan.2019.02.013>
- Shinkman, R. (2020, August 24). Study shows PE-owned hospitals increased charges, profitability while some care metrics improved. *The Healthcare Dive*. <https://www.healthcarediver.com/news/private-equity-hospitals-profit-quality-charges-JAMA/583994/>
- Stawicki, Kevin. (2020, February 13). Team Health Can't Dodge FCA Suit Over Nonphysician Billing. *Law360*.
- Strebulaev, I. A., & Kurshev, A. (2006). Firm Size and Capital Structure. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.676106>.
- Spradling v. Surgical Care Affiliates, LLC et al., No. 1:21-cv-01324 (N.D. Ill. March 9, 2021).
- Spratt, Alexandra. (2020, September 9). Private Equity has Fought Lawmakers' Attempts to Protect Patients. *Arnold Ventures*. <https://www.arnoldventures.org/stories/part-3-as-purveyors-of-surprise-medical-billing-private-equity-has-fought-lawmakers-attempts-to-protect-patients>
- Tan S, Seiger K, Renehan P, Mostaghimi A. (2019, July 24). Trends in Private Equity Acquisition of Dermatology Practices in the United States. *JAMA Dermatology*, 155(9):1013–21. doi: 10.1001/jamadermatol.2019.1634. Epub ahead of print. PMID: 31339521; PMCID: PMC6659155
- The Dermatologist. (2011). Product Selection and Dispensing in a New Health Care Era. <https://www.the-dermatologist.com/content/product-selection-and-dispensing-new-health-care-era>
- The American Medical Association. (2019, July). Report of the Council on Medical Service. <https://www.ama-assn.org/system/files/2019-07/a19-cms-report-11.pdf>
- Tollen, L. & Keating, E. (2020, August 3). COVID-19, Market Consolidation, And Price Growth. *Health Affairs*. <https://www.healthaffairs.org/doi/10.1377/hblog20200728.592180/full/>
- TPG Capital Healthcare. Leaders in Healthcare Investing. (n.d.). Retrieved March 24, 2021, from <https://healthcare.tpg.com/>
- Transcribers, M. F. (2019, May 9). Golub Capital BDC Inc (GBDC) Q2 2019 Earnings Call Transcript. *The Motley Fool*. <https://www.fool.com/earnings/call-transcripts/2019/05/09/golub-capital-bdc-inc-gbdc-q2-2019-earnings-call-t.aspx>
- Transcribers, M. F. (2020, February 11). Golub Capital BDC Inc (GBDC) Q1 2020 Earnings Call Transcript. *The Motley Fool*. <https://www.fool.com/earnings/call-transcripts/2020/02/11/golub-capital-bdc-inc-gbdc-q1-2020-earnings-call-t.aspx>
- U.S. Dep't of Justice. (2018, November 15). Atrium Health Agrees to Settle Antitrust Lawsuit and Eliminate Anticompetitive Steering Restrictions. <https://www.justice.gov/opa/pr/atrium-health-agrees-settle-antitrust-lawsuit-and-eliminate-anticompetitive-steering>

- U.S. Dep't of Justice. (2015, April 21). Family Dermatology Pcc Agrees to Pay United States More Than \$3.2 Million to Settle Alleged False Claims Act Violations. <https://www.justice.gov/opa/pr/family-dermatology-pcc-agrees-pay-united-states-more-32-million-settle-alleged-false-claims>
- U.S. Dep't of Justice. (2021, January 7). Health Care Company Indicted for Labor Market Collusion. <https://www.justice.gov/opa/pr/health-care-company-indicted-labor-market-collusion>
- U.S. Dep't of Justice, Merger Remedies Manual 24 (Sept. 2020) [hereinafter 2020 Merger Remedies Manual], <https://www.justice.gov/atr/page/file/1312416/download>
- U.S. Government Accountability Office. Report to Congressional Committees, Air Ambulance: Available Data Show Privately-Insured Patients Are at Financial Risk 17-18 (March 2019). <https://www.gao.gov/assets/gao-19-292.pdf>.
- U.S. Pharmacist. staff, B. (2012, November 14). Par to Acquire 14 Generics. Retrieved March 24, 2021, from <https://www.uspharmacist.com/article/par-to-acquire-14-generics>
- Varanini, E. E. (2020). Addressing the Red Queen Problem: A Proposal for Pursuing Antitrust Challenges to Cross-Market Mergers in Health Care Systems. 83 Antitrust L.J. 509, No. 2.
- Ventas. . Health Systems. Retrieved March 26, 2021, from <https://www.ventasreit.com/our-portfolio/health-systems>
- Vogt, W. B., Town, R., & Williams, C. H. (2006). How has hospital consolidation affected the price and quality of hospital care? The Synthesis Project. Research Synthesis Report, 9. <https://doi.org/15231>
- Wasserman, E. (2015, October 6). 19. Par Pharmaceutical. FiercePharma. Retrieved March 24, 2021, from <https://www.fiercepharma.com/special-report/19-par-pharmaceutical>
- Welsh, Carson, Anderson & Stowe. (n.d.). Healthcare. Retrieved March 26, 2021, from <https://www.wcas.com/healthcare>
- Welsh, Carson, Anderson & Stowe. (n.d.). History. Retrieved March 26, 2021, from <https://www.wcas.com/firm/history>
- Welsh, Carson, Anderson & Stowe. (2019, July 30). News Detail. <https://www.wcas.com/firm/news/welsh-carson-anderson-stowe-raises-43-billion-in-oversubscribed-thirteenth-private-equity-fund>
- Wollmann, T. G. (2020). How to Get Away with Merger: Stealth Consolidation and Its Real Effects on US Healthcare. NBER Working Papers 27274, National Bureau of Economic Research, Inc.
- Zhu, J. M. (2020, February 18). Private Equity Investment In Physician Practices. Penn LDI, Leonard Davis Institute of Health Economics. <https://ldi.upenn.edu/healthpolicysense/private-equity-investment-physician-practices>
- Zhu, J. M. (2015). Private Equity Investment in Physician Practices, 2020. American Medical Association, Corporate Practice of Medicine, 1. <https://www.ama-assn.org/media/7661/download>
- Zhu, J. M., Hua, L. M., & Polsky, D. (2020). Private Equity Acquisitions of Physician Medical Groups Across Specialties, 2013-2016. JAMA, 323(7), 663. <https://doi.org/10.1001/jama.2019.21844>
- Zhu, J. M., & Polsky, D. (2021, March 18). Private Equity and Physician Medical Practices—Navigating a Changing Ecosystem. New England Journal of Medicine, 384(11), 981–983. <https://doi.org/10.1056/NEJMp2032115>

APPENDIX

The primary data source for our analyses was the PitchBook platform provided by PitchBook Data, Inc. We used the following search criteria as the basis for our analyses:

Date Range: 1/1/2010-12/31/2020

Industry: Healthcare (include active positions)

Location: target HQ located in the US

Deal Type: "All buyout types" (Buyout/LBO, management buyout, management buy-in, add-on, secondary buyout, public to private, privatization, corporate divestiture, other)

Add-on transactions: Include

Searches were limited to private equity buyouts, as these deal types change ownership of a firm and therefore are of primary interest to our analysis.

These search criteria returned 5,952 companies and 6,372 deals as of 4/3/2021. 5,505 out of 6,372 deals (86%) were missing valuations in PitchBook data, likely due to the lack of public disclosure requirements for private equity acquisitions. For this reason, we used figures provided directly by PitchBook (see below) that include estimation of total deal values.

The PitchBook database is dynamic, and therefore results (in terms of deal counts and reported deal values) produced by these search criteria vary over time. Estimated deal counts and reported deal values appeared sensitive to changes in certain criteria (such as deal types), and not sensitive to others (such as changing the "Location:" requirement to "any locations in the US"). These estimates should therefore be understood as best-possible approximations given limited availability of data on private equity behavior.

This report presents figures (Figures 2-5) produced by the search described above. Figure 1 was produced by Pitchbook's technical support team on behalf of Eileen Appelbaum & Rosemary Batt, whose work in this area is foundational. While the exact criteria used to produce this figure were not provided, this is considered to be "standard PE methodology" by the PitchBook technical support team. The following deal types were included in this search: LBOs, add-ons, growth investments and secondary buyouts. The PitchBook team used available data such as firm size to estimate deal values when deal values were not made public.

The figure below compares deal counts produced by the Petris Center's search of the PitchBook database (figures 2-5) to deal counts produced by the PitchBook technical support team's search. The deal counts produced by the Petris Center's search were consistently slightly lower than those produced by the PitchBook team's search, with the largest percentage difference occurring in 2017. In 2017, the Petris Center's search identified 688 deals, while the PitchBook team's search identified 773 (12.4% higher), by 2020. Despite this small discrepancy, deal counts produced by the two searches run parallel, meaning that trends identified in figures produced by Petris Center searches will identify trends consistently.