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"Private Equity in Healthcare"
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Chairman Pascrell, Ranking Member Kelly, and distinguished members of the House Ways and Means Oversight Subcommittee: thank you for inviting me to testify before you.

Private equity activity in U.S. healthcare has risen dramatically over the last two decades, with total investment increasing from less than $5 billion in 2000 to more than $100 billion in 2019 (Figure 1). Private equity-owned firms now provide the staffing for more than one-third of emergency rooms, own large hospital and nursing home chains, and are rapidly expanding their ownership of physician practices.

As you know, many healthcare providers in the U.S. are private, for-profit firms. However, private equity ownership is not the same as conventional for-profit ownership by publicly traded or independent firms. In this testimony, I am first going to explain how private equity works and why it is different. Then, I will discuss why we might be concerned about private equity in healthcare even though similar concerns may not pertain to other sectors of the U.S. economy. Finally, I will describe the research that I've done on private equity investment in nursing homes.

The Economics of Private Equity Control

I want to walk you through the lifecycle of a typical leveraged buyout from the perspective of the company. Leveraged buyout transactions are particular to the way that private equity firms acquire companies. In the first step, the private equity firm chooses a company to buy. For our example, let's take the case of private equity firm Apollo Global Management's 2018 leveraged buyout of LifePoint Health from a publicly traded company (that is, Apollo Global Management took LifePoint private). LifePoint is a chain of hospitals that serve rural communities and small towns. For example, LifePoint owns Clinton Memorial Hospital in Wilmington, Ohio and the Conemaugh Miners Medical Center in Hastings, Pennsylvania.

First, who chose to buy LifePoint as opposed to another company? Professional investors who own and work at the private equity firm, called general partners, decide which firms to buy. They also make all the subsequent decisions we'll talk about: general partners organize the deal, change the company's management and maneuver assets to increase the company's value in order to sell the company at a profit. These general partners invest the capital of limited partners, who are typically pension funds, sovereign wealth funds, or university endowments.

Returning to our example, Apollo acquired LifePoint for $5.6 billion dollars. Apollo invested no more than $2.6 billion, because we know that the money management firm Barings arranged a loan of $2.9 billion to finance the deal. As in other private equity deals, it is LifePoint, not Apollo, that borrows the $2.9 billion for the acquisition of LifePoint. Apollo actually invested more equity than the usual buyout. The ratio of debt to equity in a buyout deal is typically around 5 to 1.[1] The debt usually comes not from a bank, but from dispersed lenders, such as pension funds in foreign countries. The bank, or in this case Barings, only arranges the loan.

Now we have come to one of the most peculiar and important features of private equity. I want to underscore this crucial point about debt in private equity deals: *the private equity firm does not borrow*. Instead, it is the target company that does the borrowing. That is, the debt – typically four-fifths of the total cost of buying the company – is placed on the company's balance sheet.

There are benefits to this debt, such as favorable tax treatment and its potential to discipline managers to ensure efficiency.[2,3] But there are also downsides. These debt payments are a new cost that LifePoint did not have before. As a result, LifePoint's future as a going concern becomes much more uncertain. Suppose that LifePoint cannot make its debt payments. Then Apollo does not owe the lenders anything. Instead, it is LifePoint's other stakeholders – such as its employees – and the dispersed lenders who will be in trouble. The private equity firm stands to lose only its equity investment, and the bank which arranged the leverage does not typically take any risk at all.

What happens after the deal? Private equity firms engage in two forms of engineering beyond the leverage that I've just described. The first is governance engineering, which includes changes to the compensation, benefits, and composition of the management team at the target firm to align their incentives with those of the private equity owners.[4] In general, research shows that private equity-owned firms are better managed than similar firms that are not PE-owned.[5] In LifePoint's case, Apollo brought in a new CEO who started in the same month as the deal.

The second type of engineering is operational. Operational engineering refers to the private equity firm applying its industry expertise to add value to the investment. This includes activities such as re-branding, organizational restructuring, investing in new technology, expanding to new markets, and cost-cutting.[6,7,8,9]

Now let us move to the hypothetical next steps in the lifecycle of the LifePoint deal. Apollo would typically sell LifePoint within three to six years. Suppose they can sell to another private equity firm (which is a very typical exit) for $10 billion. They return $2.9 billion to the lenders and thus have transformed their $2.6 billion equity investment into $7.1 billion, for a profit of $4.5 billion.

Of the $7.1 billion in profits, the general partners typically receive 20%, while the rest goes to the limited partners. GPs also receive transaction and monitoring fees, which are not tied to performance. In accordance with current U.S. tax law, the General Partners pay only 15% capital gains tax on all these earnings. However, private equity managers typically do not earn returns if the business continues as-is, motivating aggressive value-creation strategies.

Let's take a moment to compare the private equity model to a typical business. Suppose that you are an independent physician with one office and you wish to buy a second office to serve more patients. You get a small business loan from a bank and buy your second office. In a typical small business loan, the overall business owes the debt, and you almost certainly sign a personal guarantee. Therefore, if the second office goes under, not only are both your offices liable, but you might risk losing personal assets, such as your home, if your business cannot pay back the debt. In the private equity model, it would be the second office that owes the debt. Furthermore, like most private business owners, you probably have a long time horizon for ownership, so you likely prefer stable and relatively less risky profits. The short-term time horizon of private equity investments (as mentioned previously, around three to six years) could push managers to focus on maximizing short-term profits even if they come at the expense of long-term reputation and performance. Overall, general partners are therefore incentivized to pursue riskier, more aggressive strategies. If things go bad, they lose hardly any money; if the investment is a success, they can earn theoretically unlimited profits.

Finally, it is worth mentioning that it is hard for the dispersed lenders to monitor what the private equity firm is doing in its operational engineering. The private firm can create cash flows for the general and limited partners while still owning the company. They do this by selling assets, notably the company's real estate, thereby requiring the company to pay rent. In many industries, such as local newspapers and nursing homes, real estate owned by the company often is the most valuable part of the enterprise. General partners also create early cash flows with dividend recapitalizations, wherein the company takes on additional debt that is used to pay dividends to the investors. With enough interim cash flows from sources like this, the private equity firm can deliver strong returns to its investors even if the company goes bankrupt, leaving the dispersed lenders holding the bag.[10]

Private Equity Incentives and the Healthcare Sector

What does all of this mean for consumers and – in the case of subsidized sectors such as healthcare – taxpayers? I mentioned the word "incentive" above. Incentive alignment or lack thereof across stakeholders is crucial for understanding when this peculiar private equity business model will be beneficial for society and the broader U.S. economy versus when it will be harmful.

The details I described above can be summarized as introducing extremely high-powered profit maximizing incentives to the company. The hypothetical independently owned physician's company also wants to maximize profits. But for it, several features, including the lower debt-to-equity ratio, longer time horizon, and owner's downside risk mean that the physician's company is much less interested in extracting cash from the business and more interested in stable growth.

How do these high-powered incentives affect consumers? Research on private equity has found that in sectors where product quality is transparent, markets are competitive, and there is no government subsidy, private equity has positive effects on productivity and product quality.[11,12,13,14,15] However, healthcare has *none* of these features. Patients cannot accurately assess provider quality, they typically do not pay for services directly, and a web of government agencies act as both payers and regulators.[16,17,18] A healthcare provider can generate higher

profits in the short-term by cutting patient care costs. As taxpayers, we expect firms to optimally sacrifice these short-term profits to maintain their reputation and safeguard patient demand for the long-term. However, there is evidence that in some healthcare sectors – including nursing homes – patient demand does not respond to poor quality scores, including the facility Five Star ratings that the Centers for Medicare & Medicaid Services (CMS) produce to summarize the quality of care.[19,20] There are many reasons for this lack of response to demand, but one is that especially in rural areas, patients often have little choice among providers.

Markets have a natural ability to align firm incentives with consumer welfare. However, in healthcare, the information asymmetry between the provider and the patient, the separation of revenue from the consumer, and the government subsidies that are not tied to quality all undermine this ability. Here, high-powered incentives to maximize profits can have detrimental implications for consumer welfare. [21,22,23] As one important example, private equity-owned hospitals, which are more likely to be in rural areas, have been shown to report worse performance based on patient quality ratings and have fewer full-time employees per occupied bed.[24] Unfortunately, however, there is generally limited research on the effects of private equity in healthcare, with existing studies typically using small samples and/or short time periods.

Evidence from Private Equity Investment in Nursing Homes

In the final part of my testimony, I wish to describe in detail rigorous research that I have recently conducted to try to fill the knowledge gap about private equity in healthcare, together with coauthors Atul Gupta, Constantine Yannelis, and Abhinav Gupta at the University of Pennsylvania Wharton School, the University of Chicago's Booth School of Business, and NYU Stern, respectively. We studied the effects of private equity buyouts of nursing homes using comprehensive patient- and facility-level administrative data from the CMS. The data include 18,485 unique nursing homes between 2000 and 2017. Of these, 1,674 were acquired by private equity firms in 128 unique deals. They are located in diverse geographic areas, including both urban and rural regions (Figure 2). We observe about 7.4 million unique Medicare patients.

We overcome two challenges to estimating the causal effects of private equity ownership. First, facilities bought by PE firms could differ in a way not captured by our data. For example, they could already be of worse quality. To address this, we compare changes within a facility around the buyout event, and at the same time compare target firms to control firms that are not acquired. The second challenge is that under PE ownership, the nursing home patient mix may change, which could bias our results. To circumvent this issue, our research design exploits the fact that people prefer nursing homes located closer to them. Specifically, we control for the patient-facility match with a differential distance instrumental variables (IV) strategy,[25,26,27] exploiting patient preference for a nursing facility close to their home.

A key measure of patient welfare is short-term survival.[28] We find that going to a private equity-owned nursing home increases the probability of death during the stay and the following 90 days by about 10% of the mean of 17%, implying about 20,150 lives lost due to private equity ownership of nursing homes during our sample period. In turn, we calculate a mortality cost of about $21 billion in 2016 dollars. This is about twice the total payments – $9 billion – made by Medicare to private equity facilities during our sample period.

We find that going to a private equity-owned nursing home increases the probability of taking antipsychotic medications – discouraged in the elderly due to their association with greater mortality – by 50%. Similarly, patient mobility declines, and pain intensity increases post-acquisition. Finally, the amount billed per 90-day episode increases by 11%. Taken together, these results suggest that private equity ownership decreases nursing home productivity, as measured by our proxies for quality output per dollar spent.

To explore the mechanisms driving the effect on mortality, we assess operational changes using facility-level data. We find negative effects on Five Star quality ratings (Figures 3A-B). We next consider nurse availability, which is the most important determinant of quality of care.[29,30] We find that private equity ownership leads to a decline in nurse hours per patient-day. This is driven by nursing assistants, who are the frontline workers who provide the vast majority of caregiving hours and perform crucial well-being services such as mobility assistance, personal interaction, and cleaning to minimize infection risk and ensure sanitary conditions (Figure 3D).

Finally, we shed light on how the financial strategies particular to the private equity industry affect operations. Nursing homes are often cited as having low and regulated profit margins, which raises the question of why they are attractive targets for private equity buyouts. Using CMS facility cost reports, we study three types of expenditures that are particularly associated with the private equity model: "monitoring fees" charged to portfolio companies, lease payments after real estate is sold to generate cash flows, and interest payments reflecting the importance of leverage in the private equity business model.[31,32] We find that all three types of expenditures increase after buyouts, with interest payments rising by over 300%. These results, along with the decline in nurse availability, suggest a systematic shift in operating costs away from patient care.

Let me give you one example of one of the largest private equity deals in our sample, which is the Carlyle Group's leveraged buyout of HCR Manorcare for about $6.3 billion in 2007. Of the $6.3 billion, roughly one quarter was equity and three-quarters were debt. Four years later, Carlyle sold the real estate assets for $6.1 billion, offering investors a substantial return on equity.[33] Afterward, HCR Manorcare rented its facilities, taking on lease costs that did not exist before. An investigation found that after the real estate sale, the quality of care deteriorated.[34] The HCR Manorcare nursing home chain was ultimately unable to make its interest and lease payments, and entered bankruptcy proceedings in the spring of 2018. Carlyle sold its stake to the landlord.

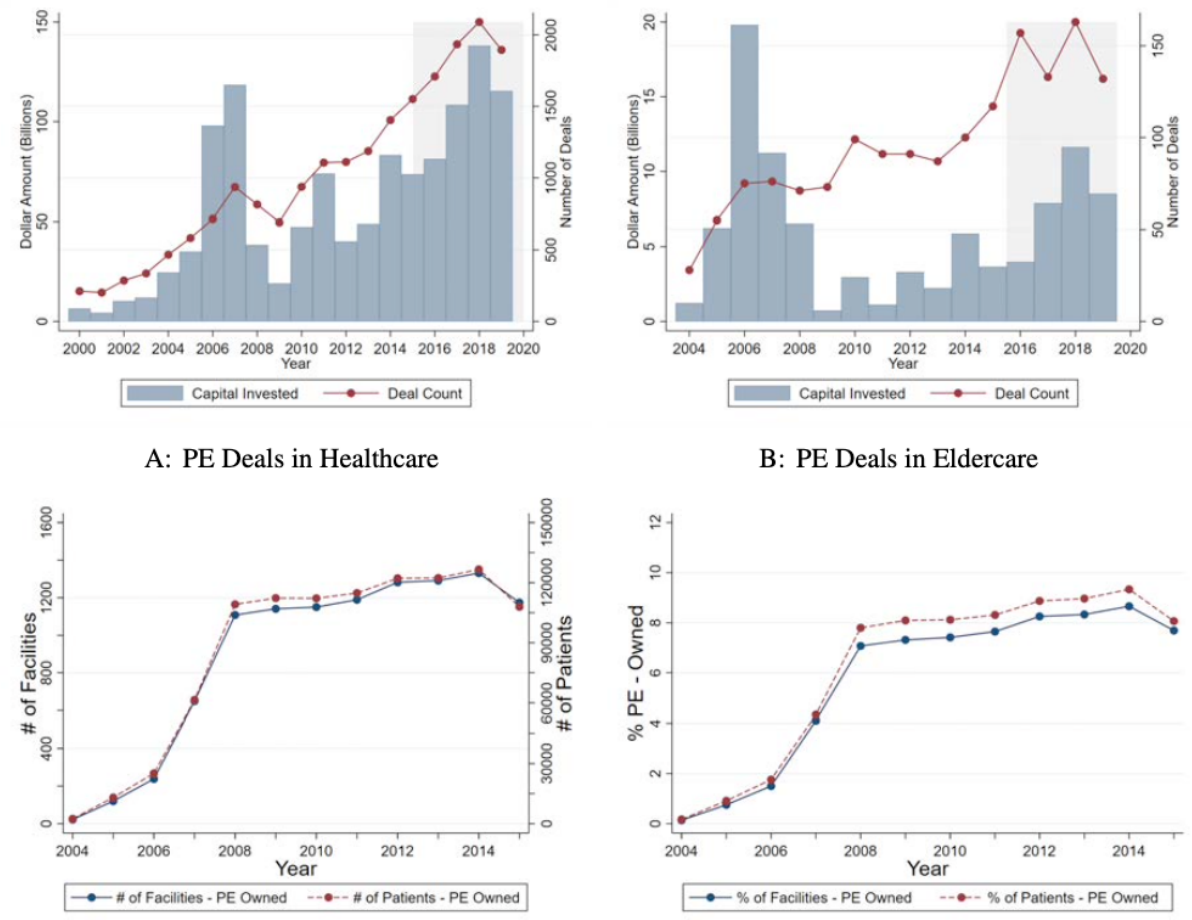
Our analysis indicates that private equity leads to worse patient outcomes and higher taxpayer spending on aggregate. It further suggests that, as in the HCR Manorcare example, private equity can extract substantial cash and potentially high returns even in the context of a struggling firm and low reported profit margins.

In closing, I want to emphasize that private equity is very different across sectors. There are reasons to believe that the effects of PE ownership might look quite different in other healthcare sectors with different incentives, such as dermatology, where there is also a lot of private equity activity. Dermatology patients tend to be less vulnerable, have more choice, and pay more out of pocket. It is reasonable to think that we could find beneficial effects of private equity ownership in that sector. Even within nursing homes, there are almost certainly examples of successful

investments that do well for both investors and patients. However, from the perspective of law- and policy-making, it is the aggregate effects that are most relevant. In the context of nursing homes, it is clear that private equity buyouts are detrimental to patients and taxpayers.

Figures

Figure 1: Private Equity Ownership in Healthcare and Nursing Homes



A: PE Deals in Healthcare

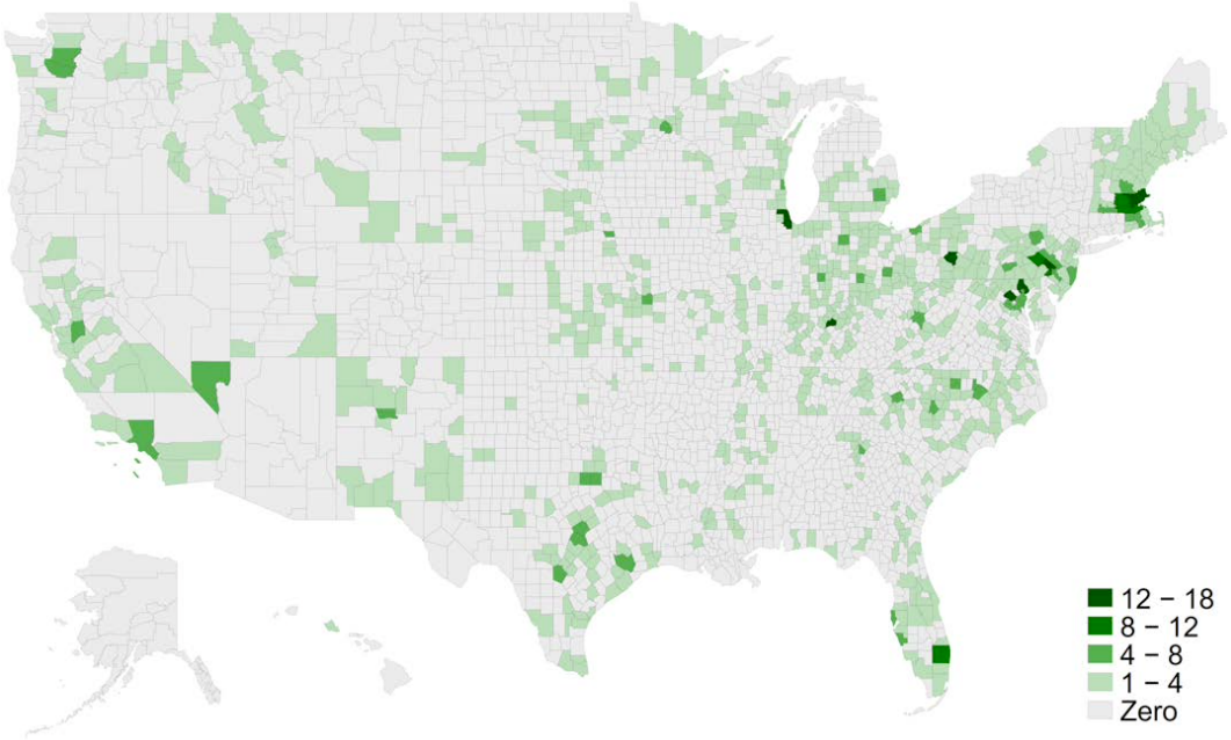
B: PE Deals in Eldercare

C: Number of Facilities and Patients Acquired

D: Percentage of Facilities and Patients Acquired

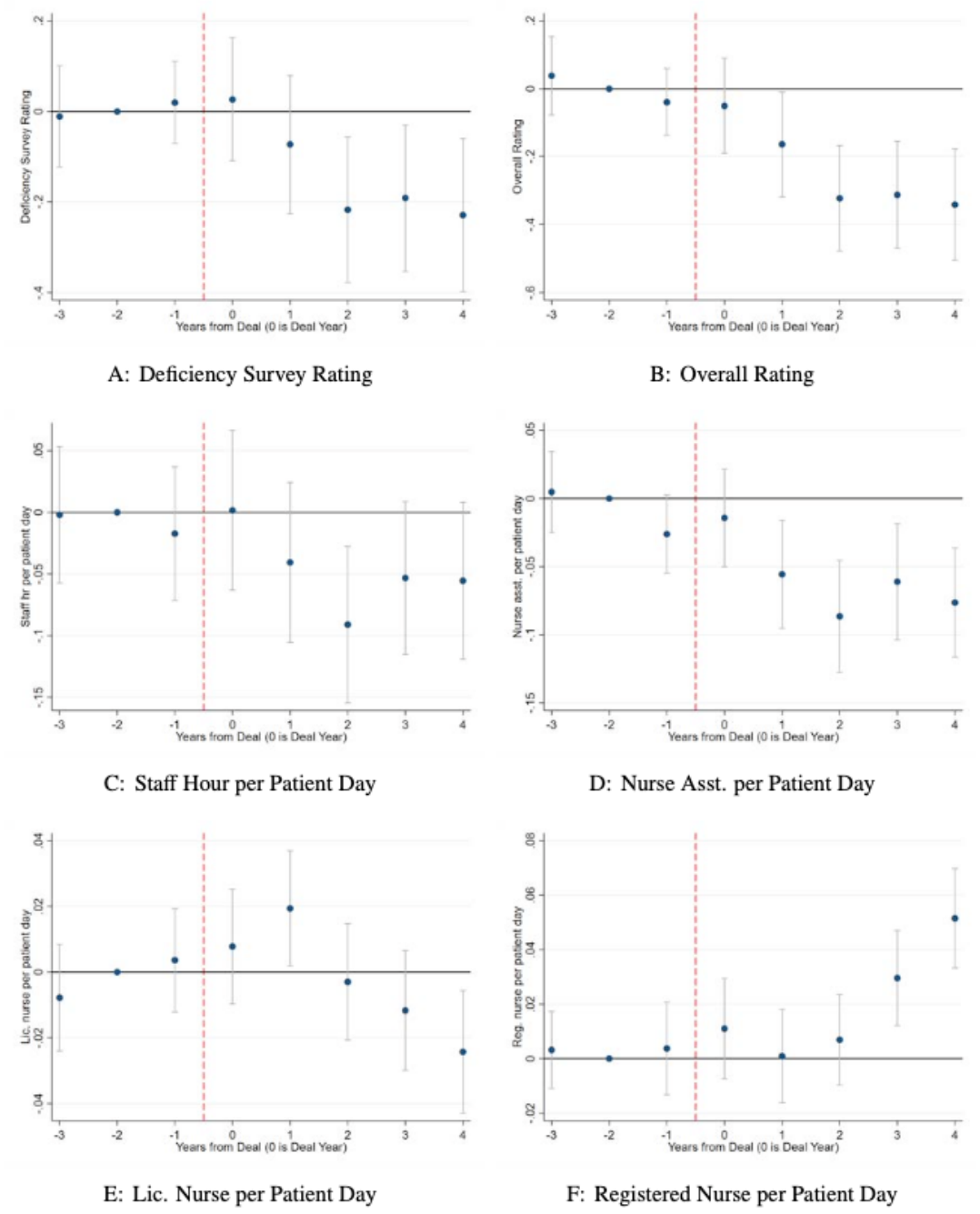
Note: This figure shows PE deals in health care over time. Panels A and B present the total capital invested (left axis) and number of transactions (right axis) by PE firms in healthcare and eldercare, by year. Panels C and D focus on the number of active nursing homes owned by PE firms in each year. Panel B presents the number of PE-owned facilities (left axis) and patients admitted at these facilities (right axis). Note that the total number of facilities ever bought by PE firms is larger (1,674) than what is plotted here since some of these facilities closed or went back to non PE ownership over time. Panel D presents these trends as a percentage of total number of facilities and patients admitted, respectively.

Figure 2: Location of Private Equity Nursing Home Targets



Note: This figure presents the number of facilities bought by PE firms in each county over the period 2004–2015. We identified 1,674 such facilities.

Figure 3: Private Equity Effects on Nursing Home Facility-Level Quality and Staffing Outcomes



A: Deficiency Survey Rating

B: Overall Rating

C: Staff Hour per Patient Day

D: Nurse Asst. per Patient Day

E: Lic. Nurse per Patient Day

F: Registered Nurse per Patient Day

Note: This figure presents event studies on quality of care measures (Five Star ratings) and Staffing around the time a nursing home experiences a PE buyout. Each point in the figures represents the coefficient β_s obtained by estimating Equation (10) as discussed in Section 6. Year = -2 is the omitted point. In Panels A and B, we present effects on the Five-star ratings awarded by CMS - deficiencies identified by independent contractors in audits and overall rating, respectively. A negative effect on ratings implies a decline in quality. Panels C to F present results on nurse staffing per-patient for all staff, nurse assistants, licensed nurses, and registered nurses respectively. All models include facility and year fixed effects, patient mix and market controls, as described in Section 6.1. All dependent variables are winsorized at 1 and 99% level. Standard errors are clustered by facility.

Endnotes

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