KNOWLEDGE FOR ACTION

Private Equity and its growth in healthcare

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What is Private Equity (PE)?

Private:

- Target firms are not publicly listed on a stock exchange
- No transparency on ownership or financial performance for those outside the deal

Equity:

- PE partners raise funds from investors: pension fund managers, endowments, sovereign funds, and wealthy individuals
- Combine this equity with debt to acquire <u>controlling</u> stakes in target firms
- PE partners and investors keep profits from the sale of this stake when they "exit" in 5-8 years

PE partners have three revenue streams:

- Annual management fees, taken from the fund (1-2% of capital)
- Share of profits from <u>exit</u>, usually 20% (known as "carried interest")
- Annual "monitoring" fees, taken from the target firm

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The PE playbook: How do they obtain profits?

Financial engineering:

- Deal is financed 60-90% using debt, hence the term, "leveraged" buyout[1]
- Debt is placed on the balance sheet of the target firm, not the PE firm
- The use of debt helps reduce tax liability and increases return on equity
- Sale of real estate unlocks capital even before exit from the deal
- Dividend recapitalization – more debt on the target firm to return capital to PE

Governance engineering:

- Change the managerial leadership, rejig the board; change performance incentives

Operations engineering:

- Costs: layoff staff, realize scale efficiencies (e.g., procurement)
- Revenue: renegotiate higher prices, expand volume (e.g., referrals), increase treatment intensity, upcoding

Notes: 1. Kaplan and Stromberg (Journal of Economic Perspectives, 2009).

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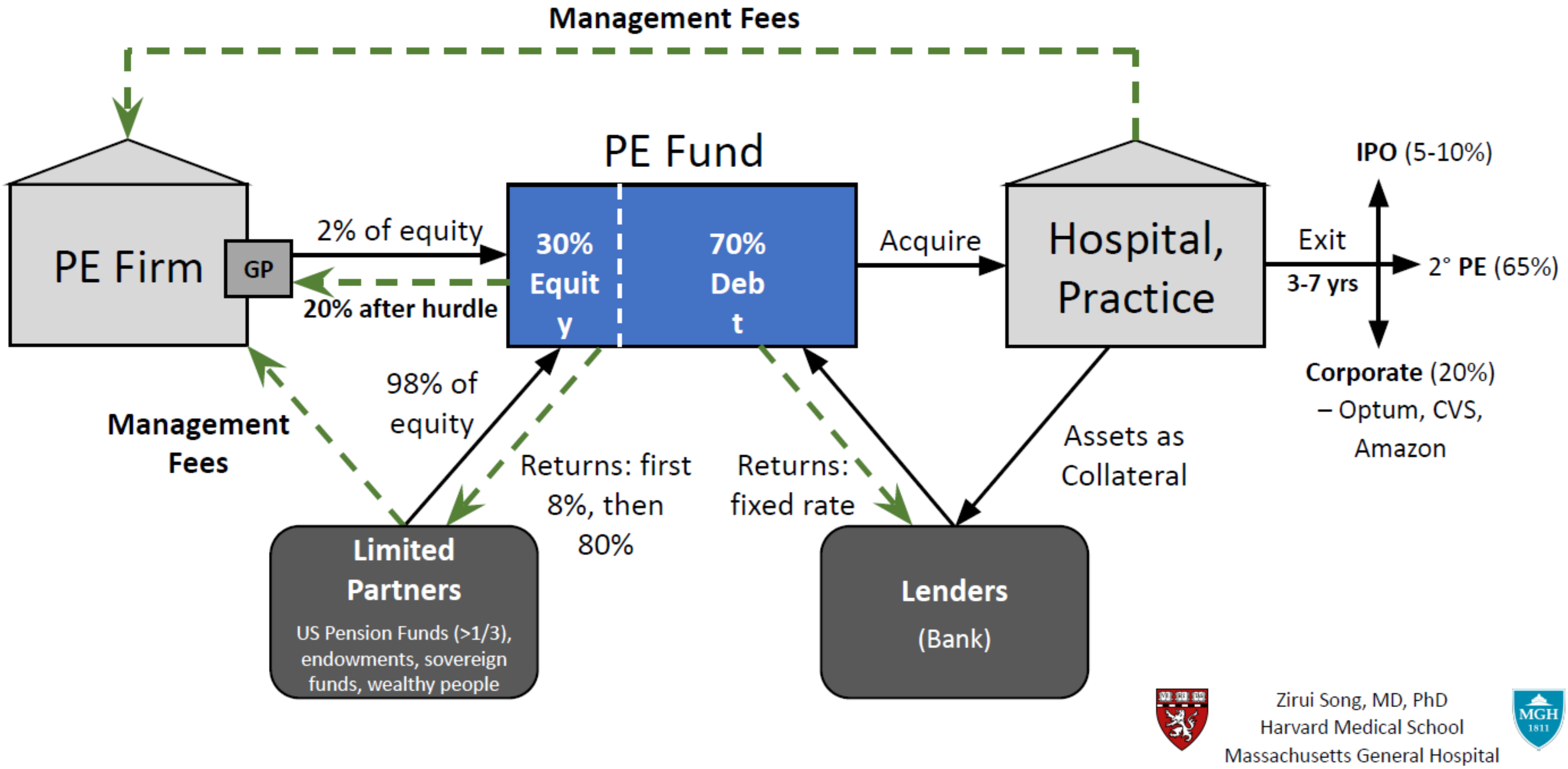
Visualizing the financing of and returns from PE investment



Source: Dr. Zirui Song, Harvard

How does PE differ from conventional for-profit ownership?

Private Equity

- Target receives relatively little capital infusion due to large share of debt
- Short-term horizon: Increase firm value within 5-7 years for resale
- Moral hazard: PE firm can do well even if the target suffers
  - Debt on target's balance sheet
  - Loss limited to (minimal) equity investment
  - Minimal hit to reputation

Conventional

- Transaction does not add to target's debt burden
- Going concern: Exit is not needed to make a payoff from investment
- Fortunes of investor and firm are intertwined, even more so if publicly listed

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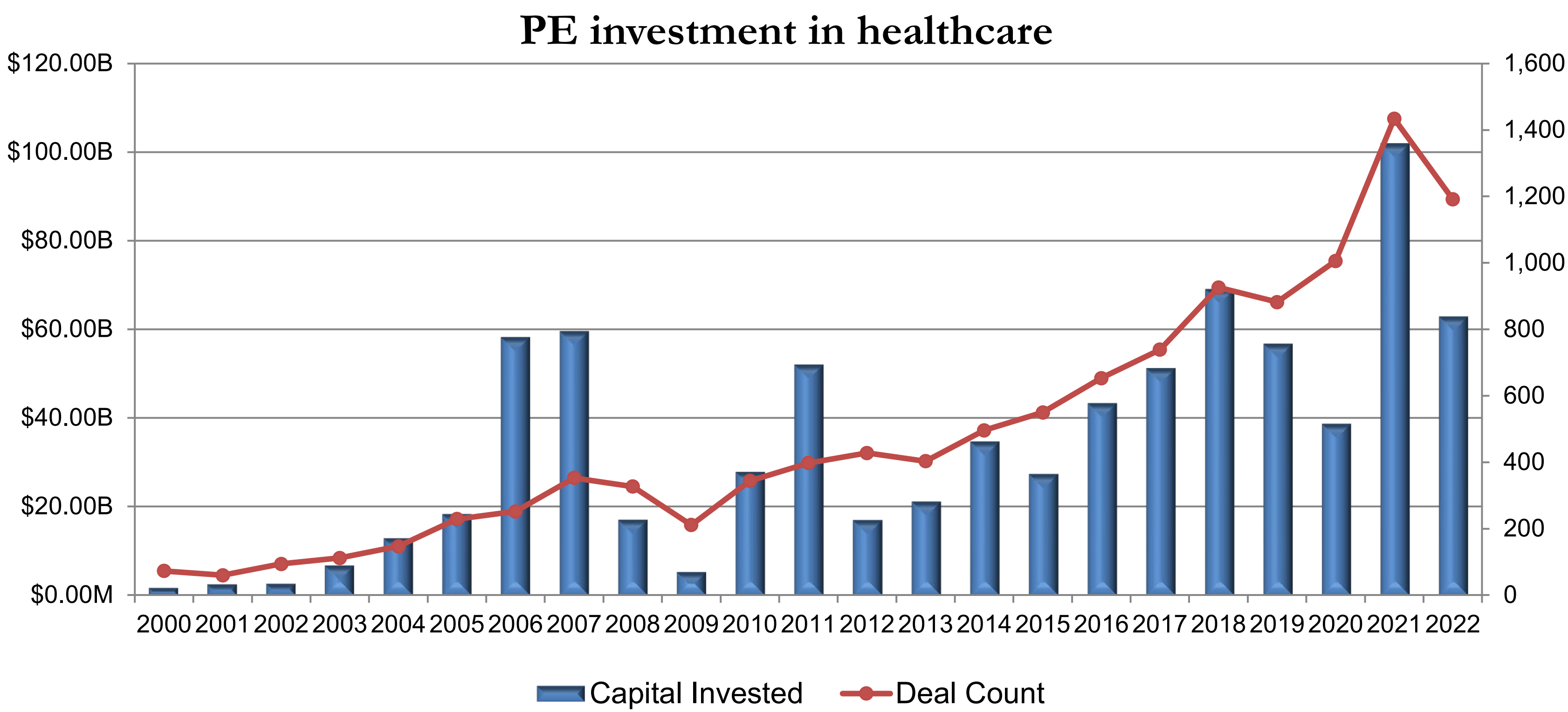
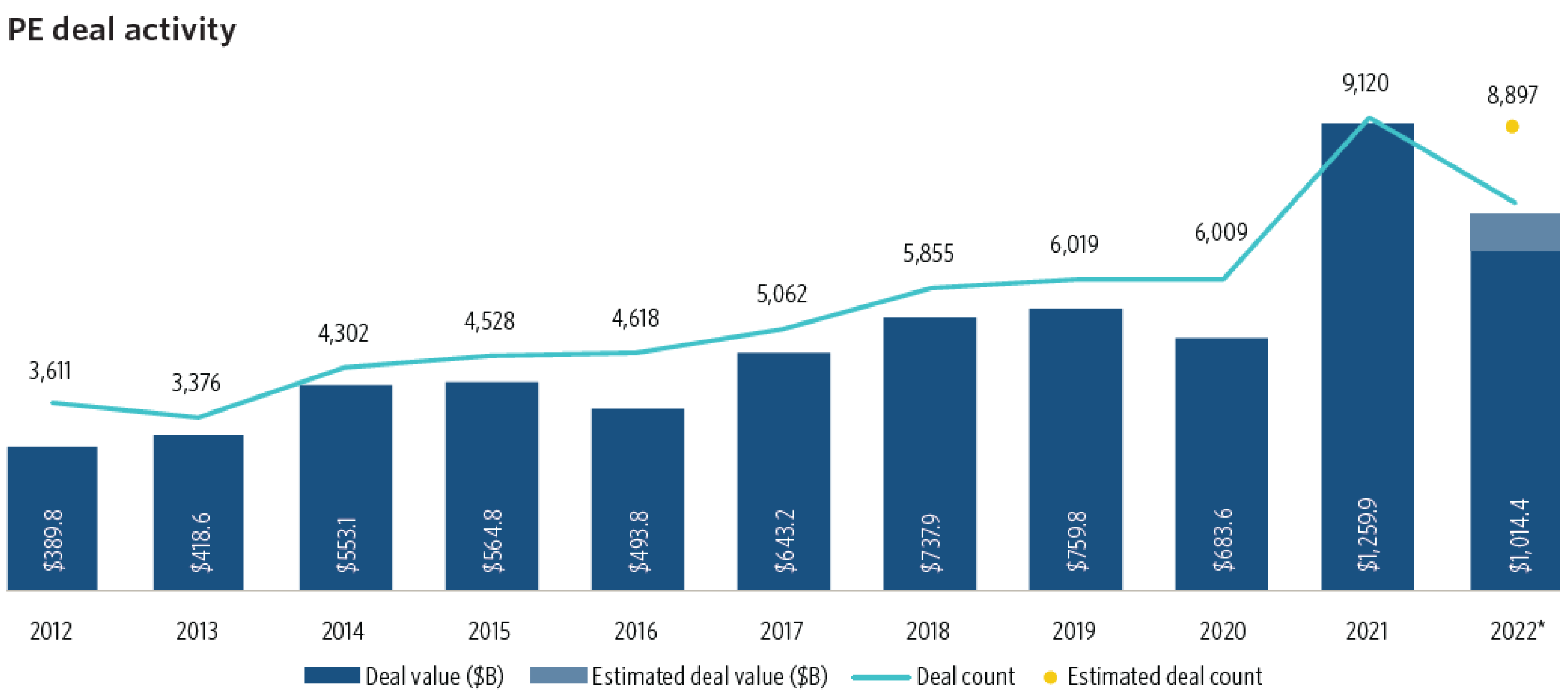
PE investment in healthcare has grown dramatically in the last decade



Notes: Figure 1, Howell and Liu (working paper, 2023). Data sourced from Pitchbook

Healthcare accounted for about 8% of total PE deal value in 2021, up from 5% in 2012



Notes: 2022 annual US PE breakdown. Pitchbook, Inc. Available at https://pitchbook.com/news/reports/2022-annual-us-pe-breakdown

Why has PE investment grown so rapidly in healthcare?

Supply side

- Cheap debt
- Favorable policies: corporate practice of medicine laws relaxed, limited antitrust scrutiny
- Macro factors: recession-proof, aging society, govt. subsidies
- Micro factors: (nearly) inelastic demand, provider fragmentation, opaque quality and uninformed consumers

Demand side

- Providers are looking for capital infusion to survive or scale up
  - Manage regulatory burdens
  - Afford IT and marketing costs
  - Negotiate higher prices
  - Defend against competitors
- PE typically nimbler than publicly listed firms and non-profits

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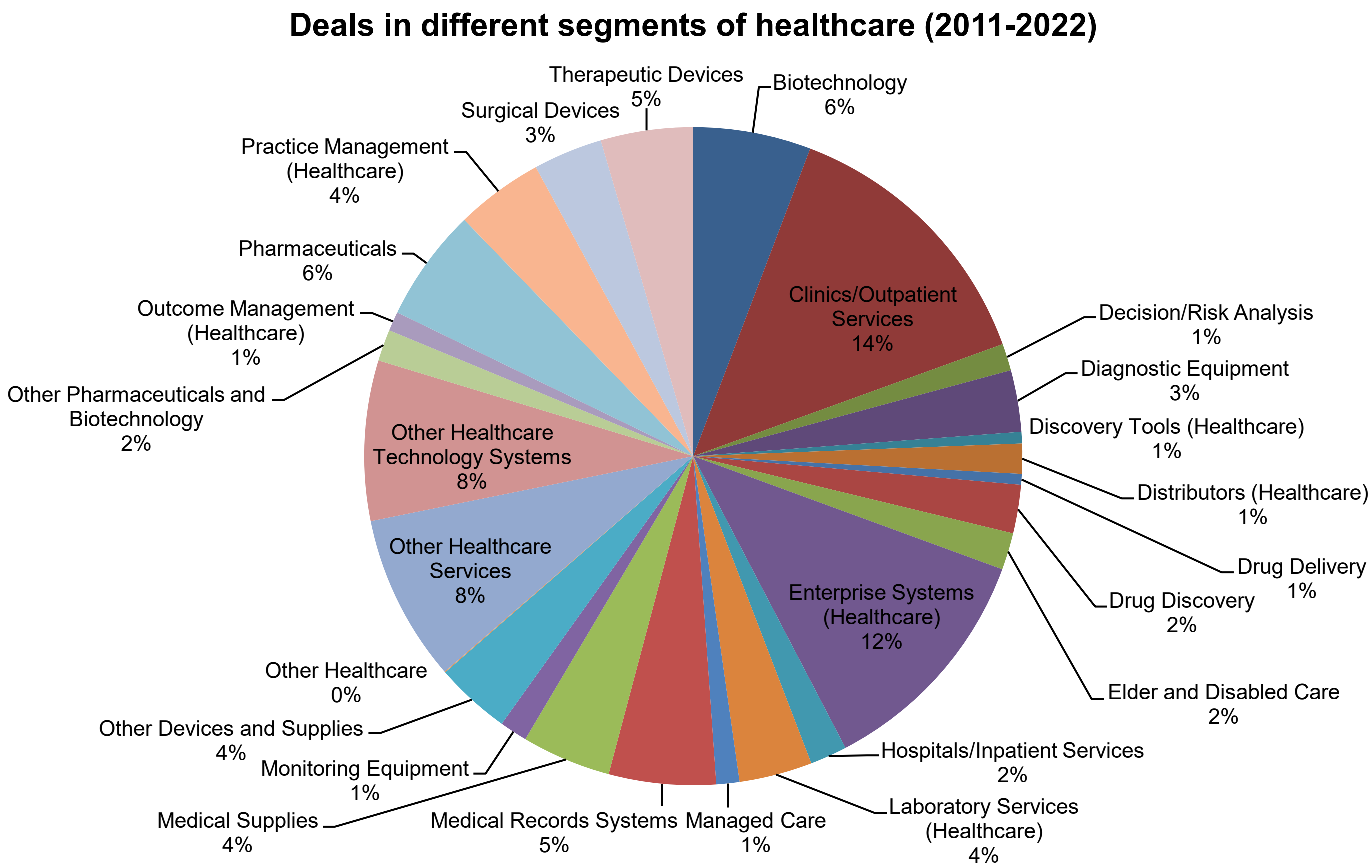
PE firms are focusing on providers and new technology/therapeutics



Notes: Figure 2b, Howell and Liu (working paper, 2023). Data sourced from Pitchbook

What is the concern over PE involvement in healthcare?

Evidence from other sectors is generally positive:

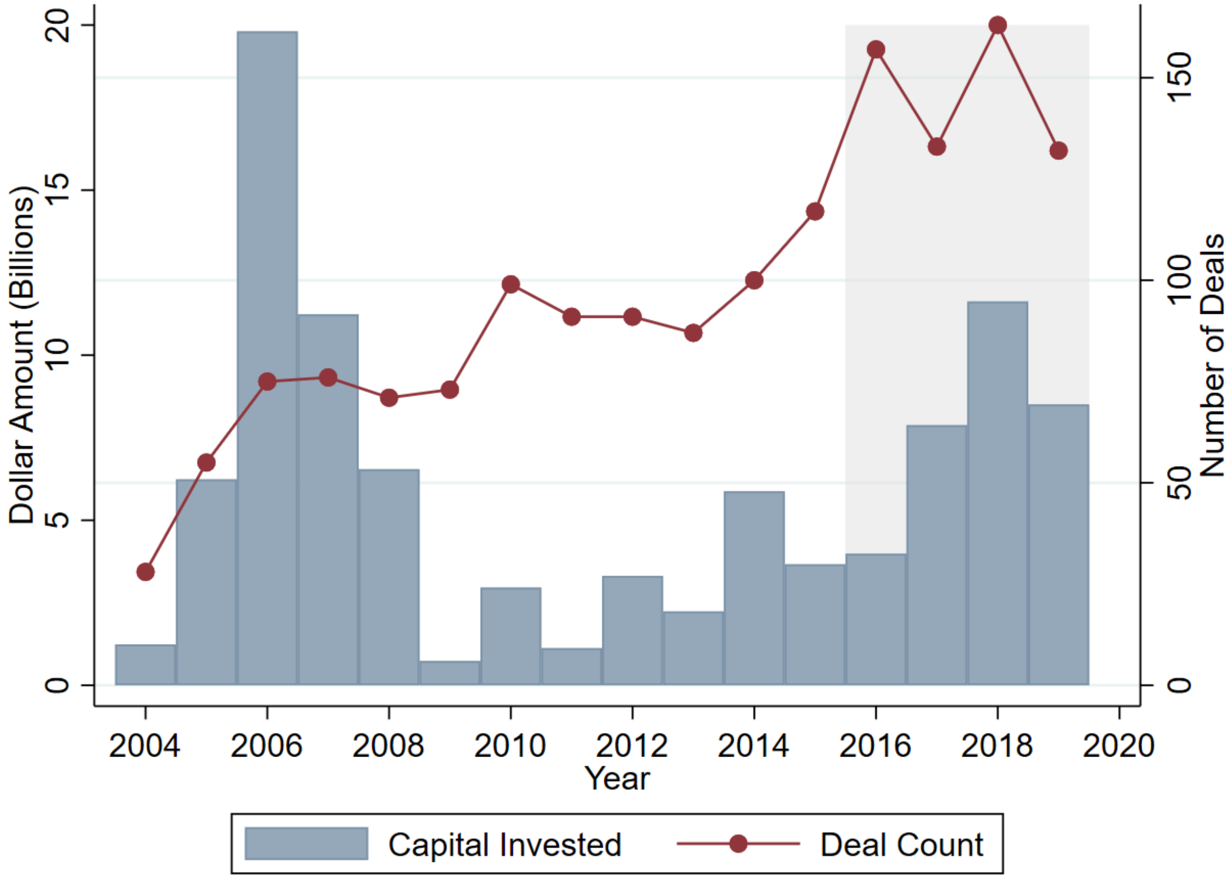
- PE ownership increases firm revenue, reduces costs, increases use of IT, in some cases increases service levels/quality (e.g., restaurants[1])
- PE ownership also leads to staff layoffs. But since it increases growth, overall employment increases[2]

But healthcare markets have some uniquely dysfunctional features:

- Low quality providers are difficult to identify and rarely punished by the market
- Consumer demand is relatively insensitive to price and quality
- Extensive government subsidies and fixed/inflexible prices
- Markets for some services are concentrated (e.g., hospitals, dialysis), and in general, very far from perfectly competitive

Notes: Bernstein and Sheen (Review of Financial Studies, 2016). 2. Davis, Steven J., John Haltiwanger, Kyle Handley, Ron Jarmin, Josh Lerner, and Javier Miranda (American Economic Review, 2014).

Growing PE involvement in nursing homes and assisted living



Source: Pitchbook, Inc.

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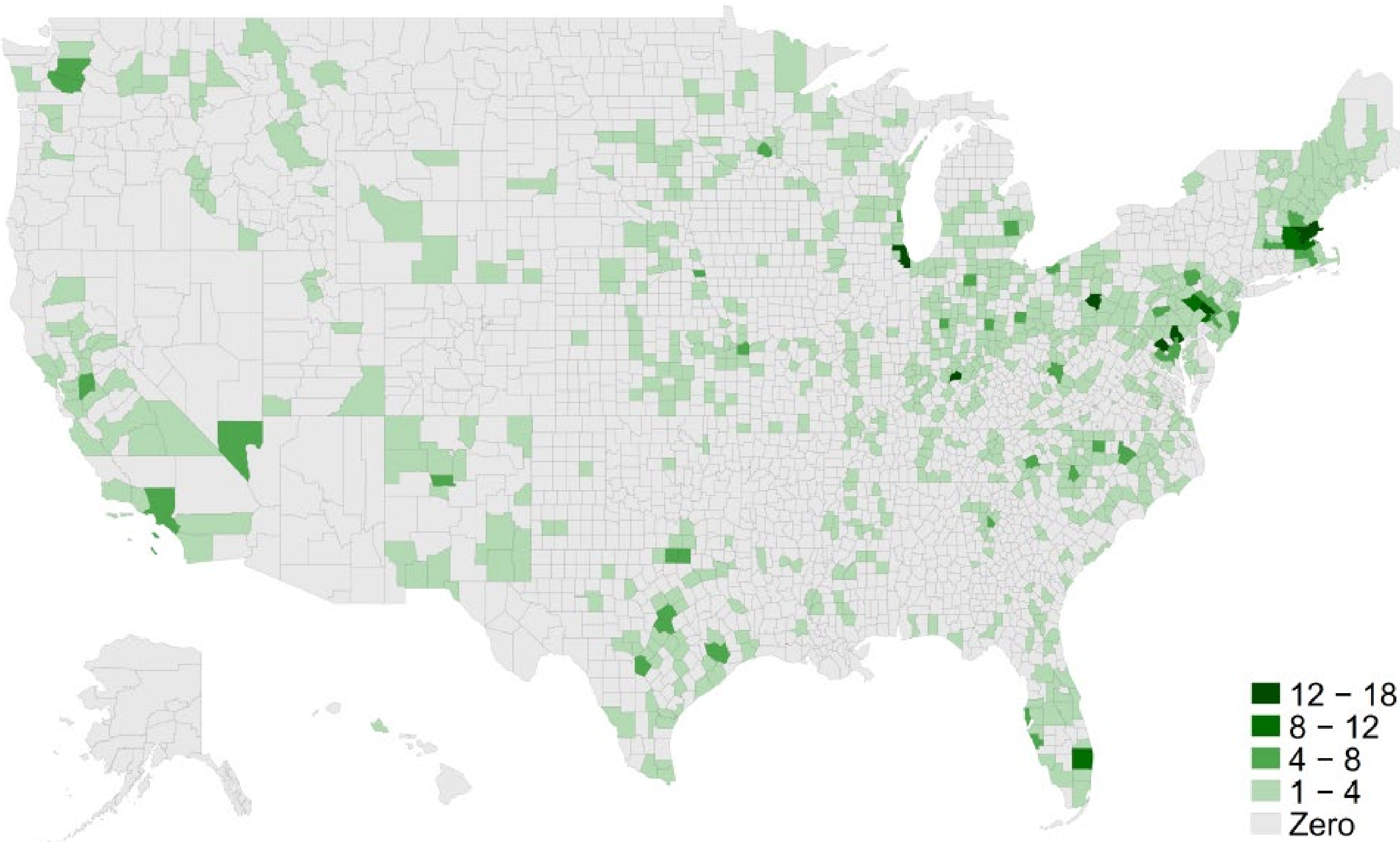
PE firms tend to target facilities in urban markets



Source: Pitchbook, Inc.

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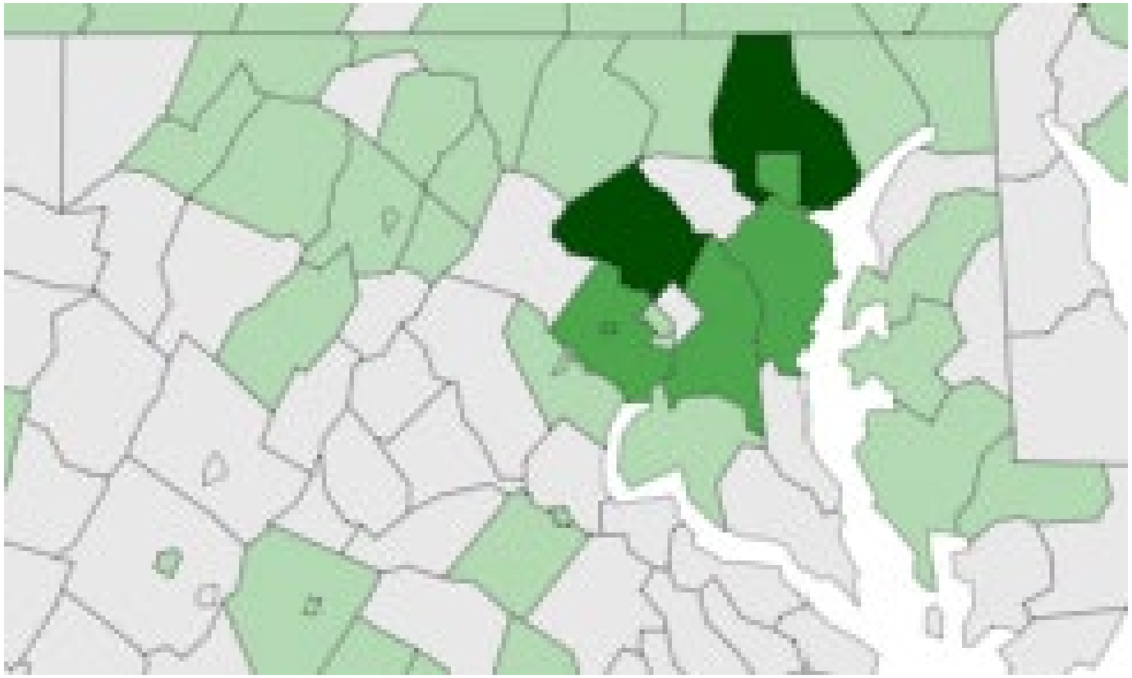
Baltimore-DC area had a disproportionate number of PE-owned facilities



Source: Pitchbook, Inc.

Evidence on PE ownership for short-stay patients

- Gupta, Howell, Yannelis, and Gupta. "*Owner Incentives and Performance in Healthcare: PE Investment in Nursing Homes*" Accepted, *Review of Financial Studies*.

- Study the impact of PE ownership of nursing homes on care and health outcomes
  - Medicare short stay patients
  - 4.2mn patients admitted over 2003—16
  - 1,674 facilities bought by PE firms over 2004—15

- <u>Bottomline:</u> PE ownership increases short-term mortality by 11% and Medicare spending by 6--8%

- <u>Mechanisms:</u> Decrease nursing staff, particularly lower-skilled nurses; greater use of antipsychotic drugs; shift in operating costs toward financial costs

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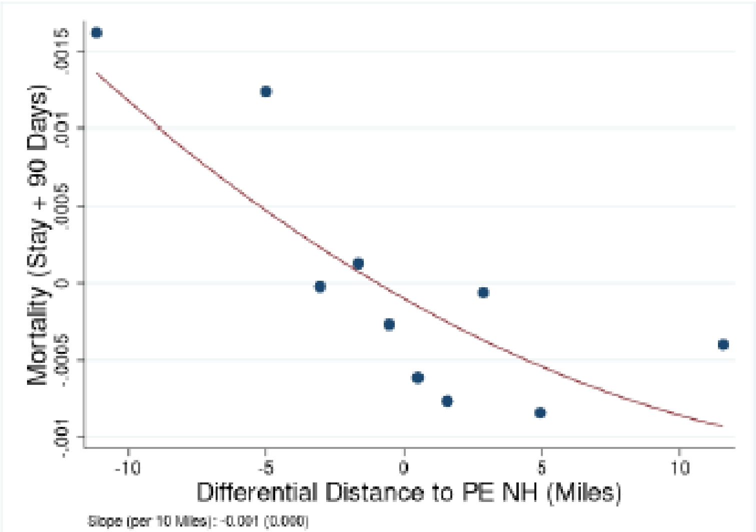
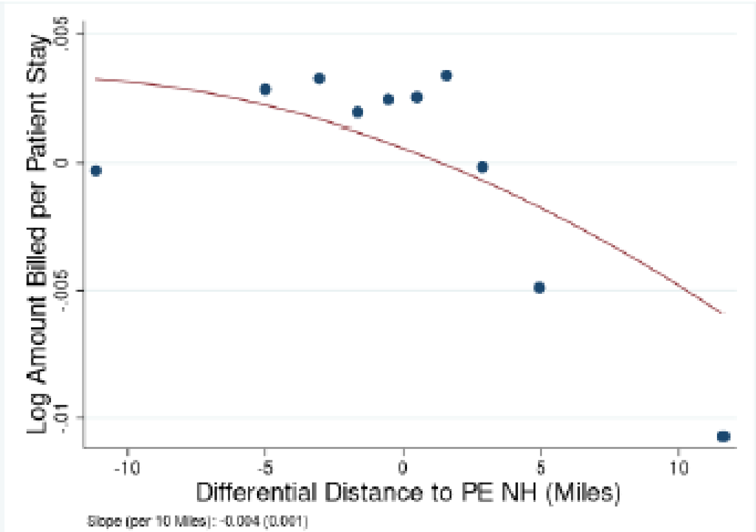
Effects on mortality and spending for Medicare patients



(a) Mortality (Stay + 90 Days)



(b) Log Amount Billed per Patient Stay

Notes: The figures plot the differential mortality rate (panel a) or log amount billed to Medicare per stay (panel b) on the Y-axis against the differential distance to a PE-owned nursing home. Lower values of differential distance imply the patient is relatively closer to a PE facility than a non-PE facility. The figures indicate that patients located closer to PE facilities have higher mortality rates and spending on stays.

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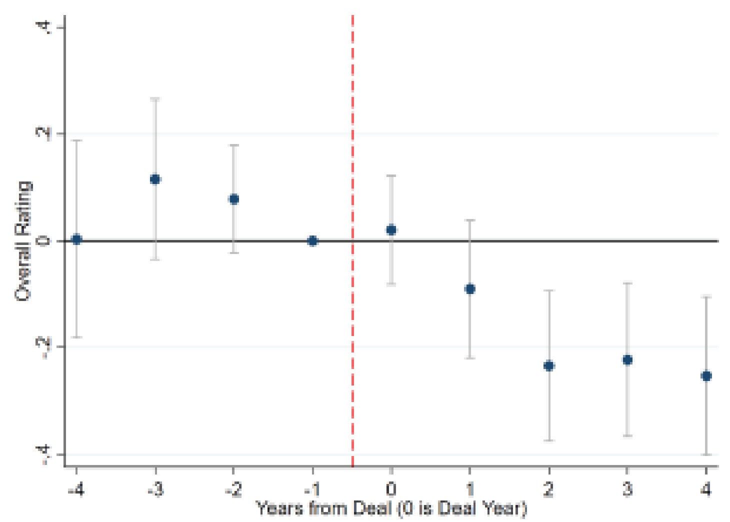
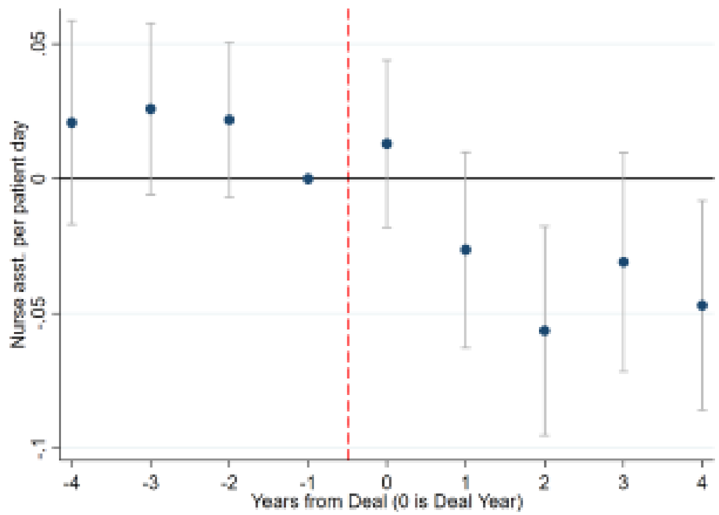
Effects on quality ratings and nurse availability



(b) Overall Rating



(d) Nurse Asst. per Patient Day

Notes: The figures plot the differential overall 5-star rating (left panel) or nursing aide hours per patient day (right panel) at PE-owned nursing homes on the Y-axis in each year around the change in ownership (year 0). A lower value of 5-Star rating implies lower levels of compliance with standards, patient outcomes, and nurse availability. Similarly, fewer nurse aide hours per patient-day implies lower quality of care.

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Evidence on long-term care patients also disturbing

- Braun, Jung, Casalino, Myslinski, and Unruh. "*Association of PE investment in US Nursing Homes with the Quality and Cost of Care for Long-Stay Residents*" *Jama Health Forum, 2021.*

- Study the impact of PE ownership of nursing homes on care and health outcomes
  - Long-stay patients (about 80% were dual-eligibles)
  - Nearly 260,000 patients admitted over 2012—18
  - 302 facilities bought by PE firms over 2013—17

- Bottomline: PE ownership increases prevalence of ED visits (11%), hospitalizations (9%), and spending (4%). No change in anti-psychotic drug use.

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