

ECONOMIC FINDING

Does Private Equity Investment in Healthcare Benefit Patients? Evidence from Nursing Homes

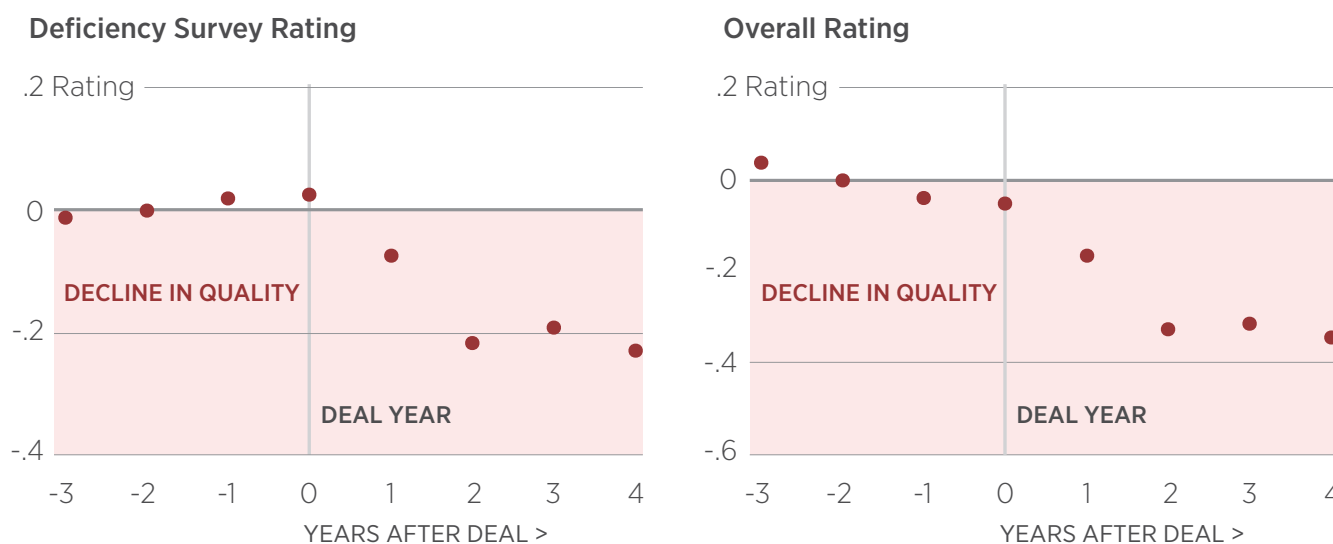
Atul Gupta, Assistant Professor, University of Pennsylvania; Sabrina T. Howell, Assistant Professor, New York University; Constantine Yannelis, Assistant Professor and FMC Faculty Scholar, Chicago Booth; and Abhinav Gupta, PhD Candidate, New York University

Private equity ownership (PE) increases the short-term mortality of Medicare patients by 10%, implying 20,150 lives lost due to PE ownership over a twelve-year sample period.

Private equity (PE) has played an increasing role in health care management in recent years, with total investment increasing from less than \$5 billion in 2000 to more than \$100 billion in 2018. PE-owned firms provide the staffing for more than one-third of emergency rooms, own large hospital and nursing home chains, and are rapidly expanding ownership of physician practices. This role has raised questions about health care performance as PE-owned firms may have incentives more aligned with firm value than with consumer welfare.

This work focuses on PE and US nursing homes, a sector with spending at \$166 billion in 2017 and projected to grow to \$240 billion by 2025. Nursing homes have historically had a high rate of for-profit ownership (about 70%), allowing the authors to study the effects of PE ownership relative to for-profit ownership more generally. Also, PE firms have acquired both large chains and independent facilities, enabling the authors to make progress in isolating the effects of PE ownership from the related phenomenon of corporatization in medical care.

Figure 1 • Aggregate Quality and Staffing Outcomes, Before and After Private Equity Buyout



Notes: This figure presents event studies on quality-of-care measures (Five Star ratings) around the time a nursing home experiences a private equity buyout. These panels 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.

The authors employ patient- and facility-level administrative data from the Centers for Medicare & Medicaid Services (CMS), which they match to PE deal data to observe about 7.4 million unique Medicare patients. The data include 18,485 unique nursing homes between 2000 and 2017. Of these, 1,674 were acquired by PE firms in 128 unique deals. Their findings include the following:

- Going to a PE-owned nursing home increases the probability of death during the stay and the following 90 days by 1.7 percentage points, about 10% of the mean. This estimate implies about 20,150 Medicare lives lost due to PE ownership of nursing homes during the authors' sample period.
- The authors estimate a corresponding implied loss in life-years of 160,000. Using a conventional value of a life-year from the literature, this estimate implies a mortality cost of about \$21 billion in 2016 dollars, or about twice the total payments made by Medicare to PE facilities during our sample period, about \$9 billion.
- The total amount billed for both the stay and the 90 days following the stay increases by about 11%.
- Nurse availability per patient declines, and there is an increase in operating costs that tend to drive profits for PE funds.

- Finally, attending a PE-owned nursing home increases the probability of receiving 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.

The authors acknowledge that although their results imply that PE ownership reduces productivity of nursing homes, such ownership may have more positive effects in other sectors of healthcare with better functioning markets. Further work is needed to determine how government programs can be redesigned to align the interests of PE-owned firms with those of taxpayers and consumers.