Research Letter

Geographic Variation in Private Equity Penetration Across Select Office-Based Physician Specialties in the US

Yashaswini Singh, MPA; Jane M. Zhu, MD, MPP, MSHP; Daniel Polsky, PhD, MPP; Zirui Song, MD, PhD

Introduction

Little is known about the extent of physician practice acquisition by private equity (PE) firms. Private equity acquisition of US physician practices increased from 59 deals representing 843 physicians in 2013 to 136 deals representing 1882 physicians in 2016.1 Because PE acquisitions are not evenly distributed across the US, some markets are more affected. This cross-sectional study examined geographic variations in PE penetration of US physician practices (share of physicians in PE-acquired practices) across 6 specialties: dermatology, gastroenterology, ophthalmology, obstetrics/gynecology, orthopedics, and urology.

Methods

We examined 2019 data from the IQVIA OneKey database, which provides physician and practice information on 9.7 million health professionals. These data are compiled from the American Medical Association (AMA) Physician Masterfile and proprietary data collection and are used to examine physician consolidation. This study followed the STROBE reporting guideline and was approved by the Oregon Health & Science University institutional review board, with a waiver of informed consent because this was non–human participant research.

Physician practices acquired by PE firms were defined by linking practice location information in OneKey to names of PE-acquired corporate owners identified in peer-reviewed research on PE acquisitions.2-5 Manual linkages were supplemented with internet searches, conducted in November 2021, of press releases and industry reports that identified practice acquisitions.

Private equity penetration was calculated at the hospital referral region (HRR) and state level as the estimated percentage of physicians across the 6 specialties who belonged to PE-acquired practices. The denominator reflects physicians in the evaluated specialties, identified using OneKey and verified against AMA data. If a physician appeared in multiple practices in an HRR, that physician was counted once. No physician appeared in multiple HRRs. We used 1-way analysis of variance to compare PE penetration across specialties, with significance at 2-sided P < .05. Stata, version 16.1 was used for analysis.

Results

In 2019, 97,094 physicians practiced in the 6 specialties; of these, 4738 (4.9%) worked in PE-acquired practices. Private equity penetration was highest in dermatology (7.5% [851 of 11,324]), followed by gastroenterology (7.4% [845 of 11,484]), urology (6.5% [492 of 7609]), ophthalmology (5.1% [741 of 14,493]), obstetrics/gynecology (4.7% [1352 of 28,493]), and orthopedics (1.9% [460 of 23,891]).

Figure 1 shows geographic variation in PE penetration across specialties. Among 200 HRRs with PE penetration, a mean (SD) of 5.6% (6.3%) physicians were in PE-acquired practices. Private equity penetration was highest in the Northeast (6.8% [1270 of 18,708]) and lowest in the Midwest (3.8% [638 of 16,613]). Twelve states and Washington, DC, had an above-average share of physicians in PE practices.
practices; 11 states had no identified acquisitions. Washington, DC (18.2% [188 of 1031]), Arizona (17.5% [326 of 1866]), New Jersey (13.6% [464 of 3409]), Maryland (13.1% [195 of 1488]), Connecticut (12.6% [212 of 1688]), and Florida (10.8% [741 of 6852]) had the highest PE penetration.

Figure 2 shows the heterogeneity in PE penetration within specialties ($F = 2.27; P = .047$). Arizona was the only state with PE penetration in the top 2 quartiles in each specialty.

Discussion

Across examined specialties, PE acquisitions of US physician practices were concentrated in certain HRRs in the Northeast, Florida, and Arizona. Because some PE acquisitions consolidate physician practices into larger organizations, geographic concentration of PE penetration may be associated with reduced physician competition, which could lead to increased prices. If PE acquisitions induce practice consolidation among remaining independent practices with financial pressures, this spillover effect may further hinder competition, underscoring the importance of monitoring practice consolidation and the ownership and regulatory environment of acquisitions. Because many PE-acquired hospitals were located in similar regions, joint PE penetration into hospital and physician markets deserves additional study.

Limitations include that data may not have captured all PE acquisitions; thus, acquisitions may be underestimated, although our dermatology estimates are consistent with a previous study. Use of secondary data from OneKey may include sampling and measurement error, although our estimates are consistent with AMA data.
Private equity penetration was estimated at the state level and represents the mean share of physicians who were affiliated with PE-acquired practices in each specialty. The numerator included physicians (doctors of medicine [MDs] and doctors of osteopathic medicine [DOs]) in PE-acquired practices in each specialty. The denominator included all physicians (MDs and DOs) in each specialty. Quartiles were determined by examining the distribution of PE penetration at the state level among states with any PE penetration. Numbers in parentheses are percentages and represent the range for each quartile.

ARTICLE INFORMATION
Accepted for Publication: March 10, 2022.

Open Access: This is an open access article distributed under the terms of the CC-BY License. © 2022 Singh Y et al. JAMA Health Forum.

Corresponding Author: Yashaswini Singh, MPA, Bloomberg School of Public Health, Department of Health Policy and Management, Johns Hopkins University, 624 N Broadway, Baltimore, MD 20215 (ysingh@jhu.edu).

Author Affiliations: Bloomberg School of Public Health, Department of Health Policy and Management, Johns Hopkins University, Baltimore, Maryland (Singh, Polsky); Division of General Internal Medicine, Oregon Health & Science University, Portland (Zhu); Department of Health Care Policy, Harvard Medical School, Boston, Massachusetts (Song).

Author Contributions: Ms Singh had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

Concept and design: All authors.
Acquisition, analysis, or interpretation of data: All authors.
Drafting of the manuscript: Singh, Zhu.
Critical revision of the manuscript for important intellectual content: All authors.
Statistical analysis: Singh.
Obtained funding: Zhu, Song.
Administrative, technical, or material support: Zhu.
Supervision: Zhu, Polsky, Song.
Conflict of Interest Disclosures: Dr Zhu reported receiving grants from the National Institute for Health Care Management during the conduct of the study and receiving grants from the National Institutes of Health (NIH) outside the submitted work. Dr Polsky reported receiving personal fees from Extend Health outside the submitted work. Dr Song reported receiving grants from the NIH, Office of the Director, NIH Director’s Early Independence Award, during the conduct of the study; receiving grants from the National Institute on Aging and the Laura and John Arnold Foundation outside the submitted work; receiving personal fees from the Research Triangle Institute, Google Ventures, Value-Based Insurance Design Health, and the International Foundation of Employee Benefit Plans outside of this work; and providing consultation in legal cases. No other disclosures were reported.

Funding/Support: This work was supported by the National Institute for Health Care Management Foundation (Dr Zhu) and grant DP5-OD024564 from the NIH, Office of the Director, NIH Director’s Early Independence Award (Dr Song).

Role of the Funder/Sponsor: The funders had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; and decision to submit the manuscript for publication.

REFERENCES