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Association of private equity ownership with increased employment of advanced practice professionals in outpatient dermatology offices



To the Editor: The recent trend of private equity investment in dermatology groups has been met with controversy.¹⁻³ One concern is that private equity-backed groups may hire more advanced practice professionals (nurse practitioners and physician assistants) per office because of lesser compensation than physicians. However, although advanced practice professionals often have broad scopes of practice,⁴ they receive various training levels, with evidence suggesting lower accuracy in diagnosing skin cancer compared with physicians.⁵

We aimed to evaluate whether ownership by private equity-backed groups had association with advanced practice professional employment by these practices compared with independently owned practices.

This study was institutional review board exempt. We queried databases (Capital IQ, CB Insights, Zephyr, ThomsonONE, PitchBook, and Factiva) and press releases to identify dermatology practices acquired by private equity-backed groups from May 2012 to November 2018 (private equity ownership for >1 year); 100 of these 229 practices were selected for comparison using a Microsoft Excel (Redmond, WA, USA) random-number generator (RANDBETWEEN).

We identified independent private practices for comparison by using the Medicare Physician

and Other Supplier National Provider Identifier Aggregate Report, a database listing providers submitting Medicare Part B noninstitutional claims from 2012-2017. A random sample of 100 dermatology providers was selected, and Google search (provider name + “dermatologist”) identified private practice employers of providers.

The number of providers employed was determined via practice website or, when not available, by calling the practice directly. The 2017 American Community Survey 5-Year Estimates were used to identify zip code sociodemographic data for offices. Offices were grouped into geographic regions based on official US Census Bureau categorization.

Sociodemographic data and provider counts were compared with Wilcoxon rank sum tests. $P < .05$ was considered significant. Analysis was performed with Stata/IC (version 15.0).

Private equity-owned and independent practices were located in zip codes with similar mean household income (mean \$102,452 [standard deviation (SD) \$46,629] for private equity-owned practices vs \$101,091 [SD \$45,522] for independent practices; z score = -0.32 ; $P = .75$) and population (mean 33,071 [SD 13,866] vs 33,458 [SD 17,283]; $z = -0.08$; $P = .93$) (Table 1). Private equity-owned practices employed more total providers (4.23 [SD 2.49] vs 3.12 [SD 2.06]; $z = -3.57$; $P < .001$), physicians (2.54 [SD 1.49] vs 2.17 [SD 1.49]; $z = -2.24$; $P = .03$), advanced practice professionals (1.69 [SD 1.75] vs 0.95 [SD 1.13]; $z = -3.56$; $P = .01$), and advanced practice professionals per physician (0.83 [SD 0.86] vs 0.56 [SD 0.79]; $z = -2.77$; $P = .01$) per clinic compared with independent practices.

Our results demonstrate that, compared with a group of independent practices with similar underlying sociodemographic features, private equity-backed dermatology practices employ both a greater number of advanced practice professionals and a higher ratio of advanced practice professionals to physicians (though still less than 1).

Limitations include sample size, overrepresentation of private equity-backed groups with greater acquisition transparency, and geographic representation differences. In addition, our study does not capture qualitative practice supervision differences; state models of advanced practice professional oversight vary. Finally, although we demonstrate private equity-owned practices’ association with greater advanced practice professional employment, this shows only correlation, not causation. We limited study to private equity-backed practices with

Table I. Sociodemographic and practice-level features associated with private equity ownership

Feature	PE-owned practice (n = 100)	Independent practice (n = 100)	Test statistic*	P value
PE-backed dermatology group, no. of practices				
Advanced Dermatology and Cosmetic Surgery	23	—	—	—
US Dermatology Partners	12	—	—	—
Epiphany Dermatology	9	—	—	—
California Skin Institute	8	—	—	—
Qual Derm	7	—	—	—
Forefront Dermatology	6	—	—	—
Platinum Dermatology	6	—	—	—
Anne Arundel Dermatology	6	—	—	—
Schweiger Dermatology	5	—	—	—
Pinnacle Dermatology	5	—	—	—
Riverchase Dermatology	5	—	—	—
United Skin Specialists	3	—	—	—
West Dermatology	3	—	—	—
United Derm Partners	1	—	—	—
Dermatologists of Central States	1	—	—	—
Total	100	100		
Years since PE acquisition, mean (SD)	2.84 (1.45)	—		
Region of the US, number of practices				
South Atlantic (DE, FL, GA, MD, NC, SC, VA, WV)	24	22	0.34	.74
East North Central (IL, IN, MI, OH, WI)	14	17	−0.59	.59
West South Central (AR, LA, OK, TX)	17	12	1.00	.32
Mid-Atlantic (NJ, PA, NY)	8	16	−1.74	.08
Pacific (AK, CA, HI, OR, WA)	11	12	−0.22	.82
Mountain (AZ, CO, ID, NM, MT, NV, UT, WY)	16	5	2.54	.01 [†]
West North Central (IA, KS, MN, MO, NE, ND, SD)	7	5	0.60	.55
East South Central (AL, KY, MS, TN)	3	5	−0.72	.47
New England (CT, ME, MA, NH, RI, VT)	0	6	−2.49	.01 [†]
Total	100	100		
Sociodemographic features of practice location				
Zip code mean income, \$	102,452 (46,629)	101,091 (45,522)	−0.32	.75
Zip code population	33,071 (13,866)	33,458 (17,283)	−0.08	.93
Providers per practice, mean (SD)				
Total providers	4.23 (2.49)	3.12 (2.06)	−3.57	<.001 [†]
Physicians	2.54 (1.49)	2.17 (1.49)	−2.24	.03 [†]
APPs	1.69 (1.75)	0.95 (1.13)	−3.56	.01 [†]
APPs per physician	0.83 (0.86)	0.56 (0.79)	−2.77	.01 [†]

AK, Alaska; AL, Alabama; APP, Advanced practice professional; AR, Arkansas; AZ, Arizona; CA, California; CO, Colorado; CT, Connecticut; DE, Delaware; FL, Florida; GA, Georgia; HI, Hawaii; IA, Iowa; ID, Idaho; IL, Illinois; IN, Indiana; KS, Kansas; KY, Kentucky; LA, Louisiana; MA, Massachusetts; MD, Maryland; ME, Maine; MI, Michigan; MN, Minnesota; MO, Missouri; MS, Mississippi; MT, Montana; NC, North Carolina; ND, North Dakota; NE, Nebraska; NH, New Hampshire; NJ, New Jersey; NM, New Mexico; NV, Nevada; NY, New York; OH, Ohio; OK, Oklahoma; OR, Oregon; PA, Pennsylvania; PE, private equity; RI, Rhode Island; SC, South Carolina; SD, South Dakota; SD, standard deviation; TN, Tennessee; TX, Texas; US, United States; UT, Utah; VA, Virginia; VT, Vermont; WA, Washington; WI, Wisconsin; WV, West Virginia; WY, Wyoming.

*Statistically significant at $P = .05$.

[†]Represents z value for 2-sample test of proportion and z score for Wilcoxon rank sum test.

greater than 1-year ownership, although private equity buyers may be acquiring practices that already employ more advanced practice professionals.

Further study is necessary to appreciate the clinical influence of potential differences in practice management, particularly given ongoing discussion regarding scope of advanced practice professional practice in dermatology.

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