BETTING ON HEALTH CARE: EVALUATING PRIVATE EQUITY ACTIVITY IN ADDICTION TREATMENT

By

Rohan Krishnan

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WHARTON RESEARCH SCHOLARS

Faculty Advisors:

Dr. David T. Grande, Associate Professor of Health Care Management

Dr. Jane M. Zhu, Assistant Professor of Medicine, Oregon Health and Science University

THE WHARTON SCHOOL, UNIVERSITY OF PENNSYLVANIA

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ABSTRACT

Over the past few decades, private equity has become a growing force in health care, with the number of private equity deals in health care increasing tenfold from 2000 to 2018. Behavioral health has seen significant private equity investment, with addiction treatment facilities being a particular target due to the high reimbursement rates and growing demand for services. Private equity investment in this sector can infuse facilities with capital and improve operational efficiencies. However, the profit motive of private equity firms can lead to strategies that prioritize revenue over quality of care, patient choice, and patient safety, perpetuating low-value care. This paper uses PitchBook data and statistical analysis to map private equity acquisitions of addiction treatment facilities across the U.S. and compare them to overdose and social determinants of health data. Understanding the scope of private equity activity in addiction treatment can inform appropriate government intervention to ensure patients receive quality care.

INTRODUCTION

Private equity firms are increasing their participation in the U.S. healthcare system. In recent decades, private equity acquisitions of healthcare organizations have grown rapidly in frequency and scale. Annual private equity deals in health care reached 855 in 2018 – a ten-fold increase from 2000. Similarly, private equity capital invested in health care reached $100B in 2018 – a twenty-fold increase from 2000.[1] Possible explanations for the growth in private equity interest in health care include the opportunity to correct operational inefficiencies, the perception that health care is recession resistant, and the increasing prevalence of chronic disease contributing to a growing demand for healthcare services. From a provider perspective, the appeal of a large lump-sum payment, relief from increasingly stringent and complex regulations, and the concern of an increasingly consolidated market motivates organizations to sell to private equity firms.[2] Specialties with high rates of acquisitions include anesthesiology, emergency medicine, dermatology, ophthalmology, and behavioral health.[3]

In 2016, private equity investment in behavioral health accounted for 60 percent of all transactions in behavioral health care.[4] According to the American Medical Association, behavioral health encompasses mental health and substance use disorders, life stressors and crises, and stress-related physical symptoms.[5] With the ongoing opioid epidemic and mounting

[1] Eileen Appelbaum and Rosemary Batt, "Private Equity Buyouts in Healthcare: Who Wins, Who Loses?" *Institute for New Economic Thinking*, no. 118 (2020): 25, https://cepr.net/wp-content/uploads/2020/03/WP_118-Appelbaum-and-Batt.pdf.
[2] Suhas Gondi and Zirui Song, "Potential Implications of Private Equity Investments in Health Care Delivery," *JAMA* (2019): 2, https://doi.org/10.1001/jama.2019.1077.
[3] Melinda B. Buntin, "The Blitzkrieg Acquisition of Medical Practices by Private Equity," *JAMA Health Forum* 1, no. 3 (2020): 1, https://jamanetwork.com/journals/jama-health-forum/fullarticle/2763407.
[4] Deborah Balshem, "Behavioral Health Continues To Attract Private Equity Investors," *Forbes*, last modified July 6, 2017, https://www.forbes.com/sites/mergermarket/2017/07/06/behavioral-health-continues-to-attract-private-equity-investors/?sh=4d33bab86210.
[5] "What is behavioral health?" *American Medical Association*, August 22, 2022, https://www.ama-assn.org/delivering-care/public-health/what-behavioral-health.

alcohol-induced death rates, addiction treatment facilities – also called substance use disorder (SUD) treatment facilities – are a target for private equity investment. From a regulatory angle, the Mental Health Parity and Addiction Equity Act of 2008 requires insurers to reimburse mental illness on par with physical illness, while reimbursement for SUD treatment is high and claims are rarely denied.[6] From a demand perspective, there is a growing need for SUD recovery services. One estimate projects that the U.S. SUD treatment industry generated $42B in 2020, with 3.7 million people receiving treatment across roughly 14,000 treatment centers.[7] Structurally, the SUD sector is largely fragmented with many "mom and pop" treatment centers.[8] With high reimbursement, growing demand for services, and the opportunity for consolidation, private equity firms are drawn to the vast potential in SUD treatment facilities.

At a superficial level, private equity intervention in SUD treatment appears to be a beneficial shift: infusing facilities with much-needed capital, increasing operational efficiencies, and relieving "mom and pop" facilities from the burdens of practice management in an increasingly consolidated system. However, the core misalignment in the missions of private equity firms and the healthcare system affects access, quality, and other facets of care. Private equity's profit motive can impede healthcare organizations' mission to provide high-quality care. private equity firms typically expect a minimum 2.5x return on each investment on a roughly six-year time horizon, raising pressure to boost revenue and cut costs over a short time span.[9]

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[6] Benjamin Brown, Eloise O'Donnell, and Lawrence P. Casalino, "Private Equity Investment in Behavioral Health Treatment Centers," *JAMA Psychiatry* 77, no. 3 (2020): 229, https://jamanetwork.com/journals/jamapsychiatry/article-abstract/2757026?resultClick=1.
[7] "United States Addiction Rehab Industry Report 2020: SAMHSA Survey Findings, Major Trends & Issues, Operating Ratios, Competitor Profiles, and More," *Global Newswire*, January 29, 2020, https://www.globenewswire.com/news-release/2020/01/29/1976908/0/en/United-States-Addiction-Rehab-Industry-Report-2020-SAMHSA-Survey-Findings-Major-Trends-Issues-Operating-Ratios-Competitor-Profiles-and-More.html.
[8] Brown, O'Donnell, and Casalino, "Private Equity Investment in Behavioral Health Treatment Centers," 229.
[9] Gondi and Song, "Potential Implications of Private Equity Investments in Health Care Delivery," 2.

Strategies to improve a facility's financial performance include increasing utilization, directing referrals internally, upcoding for services, and outsourcing duties to less-costly, unsupervised non-physician clinicians. Additionally, private equity firms consolidating a geographic market can push smaller practices out of business, further reducing access to care.[10] These profit-generating tactics subordinate quality of care, patient choice, and patient safety, while perpetuating low-value care.

Despite the numerous questions surrounding private equity's involvement in the healthcare system, there is a lack of literature examining its scope, impact on access, and resulting consequences. This paper focuses on the first of those concerns. We aim to understand whether private equity acquisitions of SUD treatment facilities are happening in geographic areas demonstrating a need for recovery and treatment services. Using PitchBook, we input search terms related to behavioral health and SUD treatment to identify private equity acquisitions of SUD treatment facilities over the past ten years. Once a dataset of transactions is aggregated and cleaned, we take a systematic approach to verify each acquisition, identify the location for each facility associated with a transaction, and use internet searches to add additional deals to the dataset. With our verified dataset, we use statistical software to map the frequency of deals across the U.S. at a state level. We then generate additional maps using state-level overdose data and social determinants of health data. Comparing these maps allows us to draw conclusions on the activity of private equity across geographic regions.

Understanding the scope of private equity activity in addiction treatment can help governments and regulators determine the need for oversight and appropriate intervention to ensure patients receive quality care. With the ongoing drug overdose epidemic exacerbated

[10] Gondi and Song, "Potential Implications of Private Equity Investments in Health Care Delivery," 3.

during the Covid-19 pandemic, quality treatment services are critical to ameliorating this trend. This research will help key stakeholders identify geographic areas of focus to supervise private equity expansion and ensure patients of quality addiction treatment.

BACKGROUND

Understanding Private Equity

Analyzing private equity's growing presence in the addiction treatment sector first requires understanding how private equity operates. Private equity firms invest in private companies with plans to add value and subsequently sell their stake for a profit.[11] These firms typically are typically expected to deliver annual returns exceeding 20 percent on an investment horizon of three to seven years, using a combination of expansion, developing new business lines, and restructuring – often by cutting costs – to achieve targets.[12] Private equity firms often use leveraged buyouts to acquire a target company, borrowing capital to procure the asset.[13] Private equity has become an influential source of financing for small healthcare groups in an increasingly consolidated market.

The opportunity to consolidate care across large markets is appealing, with private equity firms acquiring independent practices and physicians under "platform" practices, improving economies of scale, and selling these larger groups at a sizeable profit.[14] Additionally, the

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[11] Gondi and Song, "Potential Implications of Private Equity Investments in Health Care Delivery," 1.
[12] Jane M. Zhu and Daniel Polsky, "Private Equity and Physician Medical Practices — Navigating a Changing Ecosystem," *New England Journal of Medicine* 384, no. 11 (2021): 981, https://www.nejm.org/doi/pdf/10.1056/NEJMp2032115?articleTools=true.
[13] Anaeze C. Offodile II et al. "Private Equity Investments In Health Care: An Overview Of Hospital And Health System Leveraged Buyouts, 2003–17," *Health Affairs* 40, no. 5 (2021): 719, https://www.healthaffairs.org/doi/pdf/10.1377/hlthaff.2020.01535.
[14] Kristen M. Beyer, Lyudmyla Demyan, and Matthew J. Weiss, "Private Equity and Its Increasing Role in US Healthcare," *Advances in Surgery* 56 (2022): 80, https://doi.org/10.1016/j.yasu.2022.02.003.

prevailing operational inefficiencies in health care coupled with private equity's competency in introducing structural changes to enhance or extract value shows the vast potential in health care for private equity firms.[15] Finally, the perception that health care is recession resistant as an aging population requires care for rising rates of chronic diseases feeds private equity's interest in health care.

Behavioral Health and Addiction Treatment

Behavioral health care deals with the prevention, diagnosis, and treatment of behavioral health conditions, including substance use disorders.[16] According to a 2021 report from the Substance Abuse and Mental Health Services Administration, 46.3 million people aged 12 or older – 16.5 percent of the population – met the applicable DSM-5 criteria for having a substance use disorder, while the proportion of people classified as having a substance use disorder was highest among young adults aged 18-25.[17] From 2019-2020, the number of drug overdose deaths increased by almost 30 percent while nearly 75 percent of overdose deaths in 2020 involved an opioid.[18] Overdose deaths accelerated during the Covid-19 pandemic.[19] The roughly 14,000 treatment facilities in the U.S. play a critical role in helping patients overcome addiction and thus in reducing the prevalence and death rates associated with SUD. SUD treatment is commonly applied for alcohol, marijuana, hallucinogens, inhalants, opioids, sedatives, stimulants, nicotine,

[15] Anaeze C. Offodile II et al. "Private Equity Investments In Health Care: An Overview Of Hospital And Health System Leveraged Buyouts, 2003–17," 719.
[16] "What is behavioral health?"
[17] "SAMHSA Announces National Survey on Drug Use and Health (NSDUH) Results Detailing Mental Illness and Substance Use Levels in 2021," *U.S. Department of Health and Human Services*, January 4, 2023, https://www.hhs.gov/about/news/2023/01/04/samhsa-announces-national-survey-drug-use-health-results-detailing-mental-illness-substance-use-levels-2021.html.
[18] "Understanding the Epidemic," *Centers for Disease Control and Prevention*, June 1, 2022, https://www.cdc.gov/opioids/basics/epidemic.html.
[19] "Understanding Drug Overdoses and Deaths," *Centers for Disease Control and Prevention*, February 14, 2022, https://www.cdc.gov/drugoverdose/epidemic/index.html.

and more.[20] SUD treatment facilities offer various types of care services including detoxification, interim care, outpatient, hospital inpatient, residential, transitional housing, co-occurring mental health and substance use treatment, medication-assisted treatment, and more.[21]

Private Equity in Addiction Treatment

Growing government and public attention on SUD treatment have attracted private equity firms toward treatment facilities. The Mental Health Parity and Addiction Equity Act of 2008 mandates that mental illness be treated the same as physical illness regarding reimbursement, while the Affordable Care Act of 2012 abolished lifetime and 30-day limits on inpatient behavioral health treatment.[22] Private equity firms are enticed by the proposition of soaring demand, high reimbursement, expanding insurance coverage, and the opportunity to bill for long-duration treatment. Additionally, the Affordable Care Act gave more people health insurance while a specific provision allowed people to stay on their parents' insurance policies until age 26.[23] With more insured individuals – especially young adults – a larger proportion of individuals can seek SUD treatment, giving private equity companies a vast stream of cash to tap into.

The Mechanics of a Private Equity Acquisition

The process through which a private equity firm acquires a practice can be either simple or complex depending on the laws of the state where the practice operates. Corporate practice of

[20] "Recovery Is for Everyone: Understanding Treatment of Substance Use Disorders," *Centers for Disease Control and Prevention*, September 6, 2022, https://www.cdc.gov/drugoverdose/featured-topics/recovery-SUD.html.
[21] "What to Expect," *Substance Abuse and Mental Health Services Administration*, accessed April 2, 2023, https://findtreatment.gov/what-to-expect/treatment.
[22] Brown, O'Donnell, and Casalino, "Private Equity Investment in Behavioral Health Treatment Centers," 229.
[23] Alison Kodjak. "Investors See Big Opportunities In Opioid Addiction Treatment," *NPR*, June 10, 2016, https://www.npr.org/sections/health-shots/2016/06/10/480663056/investors-see-big-opportunities-in-opioid-addiction-treatment.

medicine (CPOM) laws in some states prohibit corporations from practicing medicine or employing physicians to administer care. CPOM laws were established to keep the practice of medicine from being commercialized, avoid the misalignment between a corporation's obligation to shareholders and a physician's obligation to patients, and avoid a corporation from interfering with a physician's independent medical judgment.[24]

However, private equity firms utilize management service organizations (MSOs) and professional medical corporations (PMCs) to circumvent these laws. The PMC is physician-owned and employs other physicians and clinicians. The MSO offers administrative and management support to the PMC. The MSO can purchase non-clinical assets in the PMC practice in exchange for equity, while the PMC can purchase an equity stake in the MSO. This relationship can be replicated across multiple acquired practices with multiple PMCs under a single MSO, enabling large private equity-backed organizations to form.

Private equity firms consider several qualities when evaluating a SUD treatment facility for acquisition. The more prevalent concerns are whether a given facility appears to be a sound financial investment. Private equity firms assess the average length of patient stay, whether facilities contract with major health plans or are out-of-network, the timeliness in collecting co-pays and deductibles, and future demand for detox and treatment.[25] However, firms are also heavily concerned with uncovering legal noncompliance and fraud, which tend to be commonplace in the addiction treatment space and create major liability for private equity investors.

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[24] Sailesh Konda and Joseph Francis, "The evolution of private equity in dermatology," *Clinics in Dermatology* 38, no. 3 (2020): 276, https://doi.org/10.1016/j.clindermatol.2020.02.007.
[25] "10 ways private equity investors evaluate addiction treatment centers," *Behavioral Health Executive*, February 13, 2017, https://www.hmpgloballearningnetwork.com/site/behavioral/article/finance/10-ways-private-equity-investors-evaluate-addiction-treatment-centers.

Private equity groups analyze patient reviews, compliance with the federal Anti-Kickback Statute, documentation standards, lab testing charges, and zoning and licensing issues to spot poor practices and problem areas before moving forward with an investment.[26] Still, some find that private equity firms are solely concerned with the investment potential instead of the mission of the facilities they acquire. One account maintained that a particular firm's due diligence focused on occupancy rates, insurance reimbursement, and future demand recovery services without any inquiry into what the recovery facilities do.[27]

Stakeholder Perspectives

Private equity's activity in the addiction treatment space elicits different reactions across stakeholders. From the perspective of private equity companies, there are immense benefits to be realized. One of the primary goals of private equity is to improve productivity and efficiency in portfolio investments. Healthcare spending represents almost 20 percent of the U.S. gross domestic product, a proportion that's projected to rise in the coming decades.[28] In streamlining operations, private equity firms could reduce spending and boost productivity in our healthcare system. Private equity firms also provide SUD treatment facilities with the capital to enable growth at a rate that would be impossible to achieve alone. With the state of the ongoing drug overdose epidemic, there is a greater need than ever for treatment centers across the U.S. Private equity firms provide the capital for regional clinics to grow nationally and expand recovery treatment, a feat that would take a single facility many years of fundraising to accomplish otherwise.[29] Finally, operational improvements may improve healthcare delivery. Investors may

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[26] "10 ways private equity investors evaluate addiction treatment centers."
[27] Kodjak.
[28] Kristen M. Beyer, Lyudmyla Demyan, and Matthew J. Weiss, "Private Equity and Its Increasing Role in US Healthcare," 84.
[29] Kodjak.

make administrative processes more efficient, accelerate the adoption of compliance systems and clinical metrics, provide industry knowledge, and facilitate practice modernization with infrastructure like electronic medical records.[30] In the pursuit of increased efficiency, private equity firms can make the patient experience more efficient while possibly reducing instances of fraud and medical error, resulting in higher quality care.

Provider sentiments vary when deciding to sell a practice to a private equity group. On one hand, private equity firms provide the capital and resources to facilitate practice growth, increase negotiating power with suppliers and insurers, relieve financial pressures from increasing overhead, improve efficiency with better technology, and support practice management with revenue cycle and HR functions.[31] Additionally, considering perpetually changing regulations, competition for insurance contracts in an increasingly consolidated market, and the proposition of a sizeable buyout taxed at capital gains rates, aging physicians may be heavily motivated to transition out of medicine. Still, the promise of growth under private equity stewardship is not appealing to all providers. Rapid growth often involves combining practices with dissimilar cultures, increasing reliance on non-physician clinicians, and shifting decision-making power to private equity firms. These changes can stress practice-wide culture, impact job security, reduce the quality of patient care, and eliminate physician autonomy if financial goals are not met. Compounding these changes, practices contend with the consequences of turnover in ownership every three to seven years, as an initial buyout initiates a period series of private equity investments that leaves culture, financial goals, autonomy, and other factors in flux with

[30] Jane M. Zhu and Daniel Polsky, "Private Equity and Physician Medical Practices — Navigating a Changing Ecosystem," 982.
[31] Frini Makadia, Jacob Roskam, and Ruth D. Williams, "To sell or not to sell: considerations when evaluating private equity acquisitions," *Current Opinion in Ophthalmology* 33, no. 5 (2022): 387, https://journals.lww.com/co-ophthalmology/pages/articleviewer.aspx?year=2022&issue=09000&article=00011&type=Fulltext.

each subsequent sale. Younger physicians bear a disproportionate share of the consequences associated with these changes, as they have many working years left and receive a lower payout windfall compared to the senior-most, late-career physicians.[32] These physicians may face reductions in salary, job security, physician oversight on clinical practice, and lifetime earning potential, as well as restrictive covenants limiting the ability to practice in a specific geography after leaving a private equity-backed practice.

Private equity's involvement in addiction treatment has significant implications for patients. The function of private equity is to realize profits on companies by adding value raising revenue or cutting costs, while the function of health care is to provide the best quality services to enhance the health of a community. This apparent misalignment leads to the concern that private equity firms will focus solely on boosting profits through unsustainable practices that subordinate patients' best interests.[33] Private equity-backed addiction treatment facilities have been accused of charging high patient fees without providing evidence-based care, forgoing the American Society of Addiction Medicine's guidelines on how to manage SUDs in favor of more profitable treatment plans.[34] Only a handful of states mandate that facilities offer FDA-approved medications like Suboxone to treat SUDs and follow certain best practices. As a result, some private equity-backed facilities place patients in weeks- or months-long inpatient programs for detox, therapy sessions, and group meetings – services offered for free across the country – while cutting costs on staff and services, neglecting patient needs for quality, effective treatment. Additionally, private equity ownership of recovery facilities can compromise access to care.

[32] Mohammed Ali Khan, "Private equity acquisitions: physician considerations at different stages of career," *Current Opinion in Ophthalmology* 33, no. 5 (2022): 382, https://journals.lww.com/co-ophthalmology/Fulltext/2022/09000/Private_equity_acquisitions__physician.10.aspx
[33] Kristen M. Beyer, Lyudmyla Demyan, and Matthew J. Weiss, "Private Equity and Its Increasing Role in US Healthcare," 82.
[34] Renuka Rayasam and Blake Farmer. "Some addiction treatment centers turn big profits by scaling back care," *CBS News*, January 30, 2023, https://www.cbsnews.com/news/drug-treatment-rehab-private-equity-profits/.

Private equity firms are inclined to target demographics with high reimbursement and income to maximize returns. As a result, private equity-backed SUD treatment facilities may prioritize commercially insured, high-income patients.[35] In a study of private equity-owned hospitals, Bruch and colleagues found that private equity hospitals on average were located in areas that are more rural and have a lower median household income.[36] This could suggest a problematic trend, where private equity firms further reduce access to care in vulnerable populations. Beyond targeting socioeconomically advantaged populations, private equity-backed treatment facilities may perpetuate dubious billing practices. Facilities facing pressure from private equity firms to raise revenue may engage in upcoding practices.[37] In a study on price changes in private equity-backed physician practices, Singh et al. found that practices across specialties on average billed more for visits after being acquired by a private equity firm, either the result of efficient documentation or upcoding insurance companies to increase revenue.[38] In the case of upcoding, the integrity of a patient's medical record is compromised while funds are diverted from government and commercial payors.

METHODS

Developing an analysis of private equity-backed SUD treatment centers involved a series of steps. First, we used PitchBook to identify acquisitions of SUD treatment centers by private

[35] Jane M. Zhu and Daniel Polsky, "Private Equity and Physician Medical Practices — Navigating a Changing Ecosystem," 982.
[36] Joseph Bruch, Dan Zeltzer, and Zirui Song, "Characteristics of Private Equity–Owned Hospitals in 2018," *Annals of Internal Medicine* 174, no. 2 (2021): 279, https://doi.org/10.7326/M20-1361.
[37] Jane M. Zhu and Daniel Polsky, "Private Equity and Physician Medical Practices — Navigating a Changing Ecosystem," 982.
[38] Yashaswini Singh, et al, "Association of Private Equity Acquisition of Physician Practices With Changes in Health Care Spending and Utilization," *JAMA Health Forum* 3, no. 9 (2022): 8, https://jamanetwork.com/journals/jama-health-forum/fullarticle/2795946?utm_campaign=articlePDF&utm_medium=articlePDFlink&utm_source=articlePDF&utm_content=jamahealthforum.2022.2886.

equity groups over a ten-year period. Second, we verified each private equity acquisition and located the street address of each SUD treatment facility associated with the deals. Third, we augmented the dataset by searching for additional deals from previously identified private equity groups. Finally, we used statistical software to analyze our data alongside state-level public health data.

Identifying Private Equity Acquisitions

To generate our dataset, we used PitchBook to search for private equity acquisitions in behavioral health from 2013 to 2023.[39] We used filters for backing status, deal date, and industry as well as keywords relating to behavioral health to refine our search. The resulting search yielded 489 total deals. We then cleaned the data to remove any deals unrelated to behavioral health or the other search terms, paring down the dataset to a remaining 135 deals. Because the dataset encompassed all behavioral health deals, we used the keywords provided by PitchBook to assign one of three labels to each deal: “autism care”, “substance use disorder treatment”, and “inpatient and outpatient mental health treatment”. For this analysis, we chose to focus on the SUD treatment acquisitions, leaving us with 50 deals remaining in our dataset.

[39] January 1, 2013 to January 2, 2023

Figure 1: PitchBook Search Terms

Backing Status	PE-backed
Deal Date	01-Jan-2013 to 13-Jan-2023
Industries	“Clinics/Outpatient Services”, “Elder and Disabled Care”, “Hospitals/Inpatient Services”, “Other Healthcare Services”, “Other Healthcare”
Keywords	“mental health”, “behavioral health”, “substance abuse”, “mental healthcare”, “mental health counseling”, “mental health treatment”, “mental health support”, “behavioral healthcare”, “behavioral health treatment”, “behavioral healthcare service”, “behavioral health program”, “psychiatry”, “psychiatry treatment”, “psychiatry service”, “psychiatry clinic”, “geriatric psychiatry”, “psychology”, “behavioral psychology”, “substance abuse treatment”, “substance abuse counseling”, “substance abuse care”, “substance abuse programs”, “substance use disorder”, “substance use disorder treatment”, “substance use treatment”, “substance use care”, “substance use disorder monitoring”, “Other Healthcare”, “Clinics/Outpatient Services”, “Elder and Disabled Care”, “Hospitals/Inpatient Services”, “Other Healthcare Services”

With the cleaned dataset, we began the process of verifying the 50 SUD treatment acquisitions. For each deal, we would search the internet with the name of the acquired entity in search of press releases and news announcements. After verifying a given acquisition, we would review supporting documents or the acquired entity’s website for the street addresses of facilities, practice names with any name changes if applicable, listed services, and the date of the

transaction. Data on the size of each deal was difficult to find, as private equity firms have no requirement and little incentive to disclose such information. We would also search for additional transactions based on the private equity firm (e.g. "X firm acquisitions behavioral health") as well as facilities associated with an acquired group that were not part of the original deal. This allowed us to identify additional private equity acquisitions that were not listed in PitchBook as well as facilities opened after each acquisition to add to the dataset.

Analyzing Private Equity Footprint

Having prepared a final dataset of private equity-acquired SUD treatment facilities, we used the statistical software R to conduct a series of analyses evaluating the scope of private equity intervention in SUD treatment. We first sought to generally determine where private equity activity is happening. Using the street address information, we were able to calculate the number of facilities from our sample that were acquired in each state during the study period. Additionally, we were able to geocode each facility's street address and use R's plotting functionality to generate a map of the acquired SUD facilities and discover any trends.

For the second part of our analysis, we sought to understand more particularly if private equity acquisitions are happening in states demonstrating a need for addiction recovery services. We referenced state-level datasets incorporating various metrics to evaluate each state. We evaluated state drug overdose rates from the Centers for Disease Control and Prevention's (CDC) Wonder database.[40] We used data from the Agency for Healthcare Research and Quality's (AHRQ) Social Determinants of Health database to obtain information on insurance

[40] "About Underlying Cause of Death, 1999-2020," *Centers for Disease Control and Prevention Wonder*, accessed April 2, 2023, https://wonder.cdc.gov/ucd-icd10.html.

coverage across different states.[41] Finally, we evaluated the need for SUD treatment services among teens using data from the Kaiser Family Foundation's (KFF) Mental Health & Substance Use indicators.[42]

With each of these datasets, we used R to analyze and visualize metrics surrounding addiction treatment to compare against our data on private equity acquisitions in the SUD space. This would allow us to determine whether private equity activity is happening in areas demonstrating the need for SUD treatment services across various metrics. From this, we can determine the implications and considerations for patients, providers, regulators, and other key stakeholders.

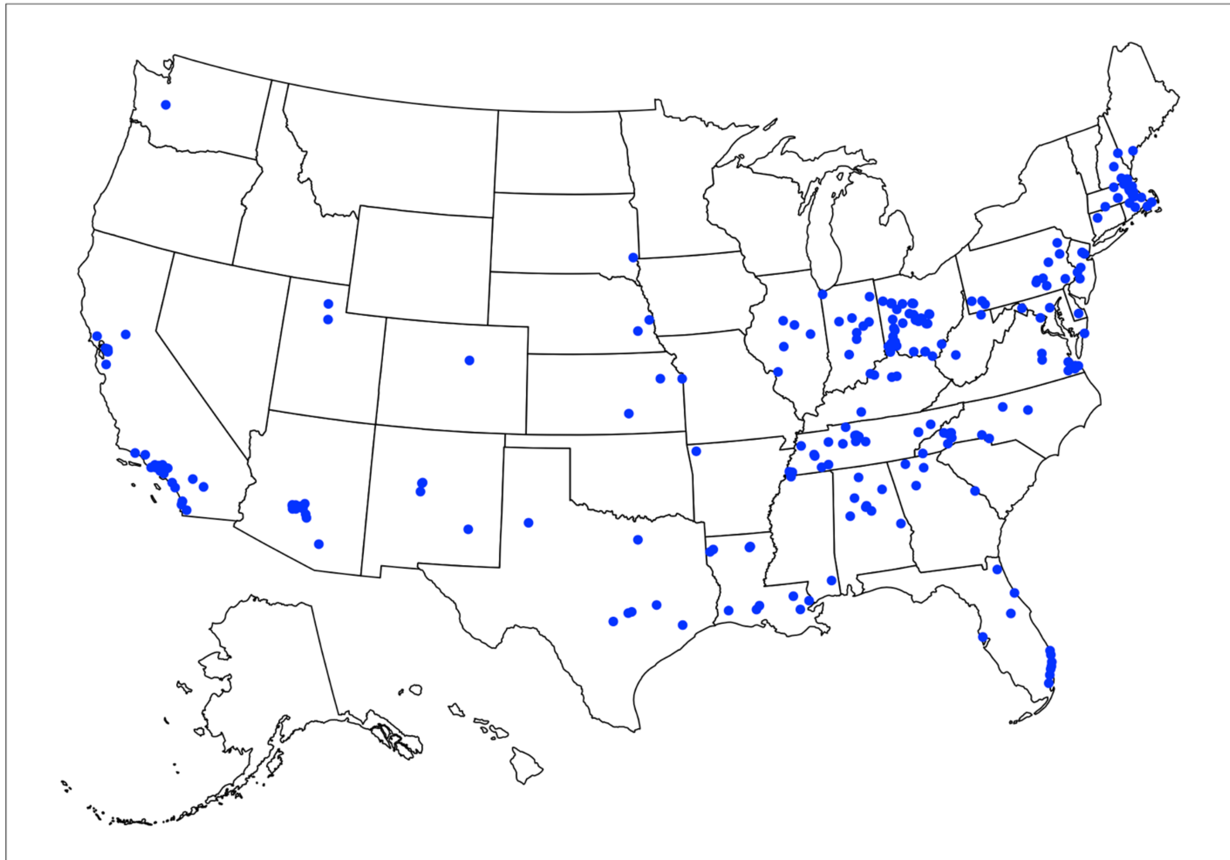
RESULTS

Volume of Private Equity Transactions

We analyzed our sample to determine the number of private equity acquisitions and unique facilities involved in those transactions over the period 2013-2023. During this period, we identified a total of 79 private equity acquisitions involving 254 unique addiction treatment facilities. Of this total number of facilities, we found 203 facilities to have been acquired as part of the original private equity deal while 51 facilities were opened post-transaction by the acquired entity.

[41] "Social Determinants of Health Database," *Agency for Healthcare Research and Quality*, November 1, 2022, https://www.ahrq.gov/sdoh/data-analytics/sdoh-data.html.
[42] "Mental Health & Substance Use," *Kaiser Family Foundation*, accessed April 2, 2023, https://www.kff.org/state-category/mental-health/.

Figure 2: Acquisitions of SUD Treatment Facilities, 2013-2023



While we were unable to locate accurate financial estimates on deal size, we could gauge the size of each transaction by the number of facilities acquired. The largest transaction was that of Column Health by Brightview Health – a platform organization capitalized by Shore Capital Partners – in a deal that included 16 treatment facilities. Based on our sample, on average roughly 3 facilities were acquired as part of a given original private equity deal. Of the private equity firms, Webster Equity Partners – the firm behind BayMark Health Services – acquired the most addiction treatment facilities during this period, with a total of 77 facilities.

Figure 3: Private Equity Firms with the Largest Number of Acquired Facilities

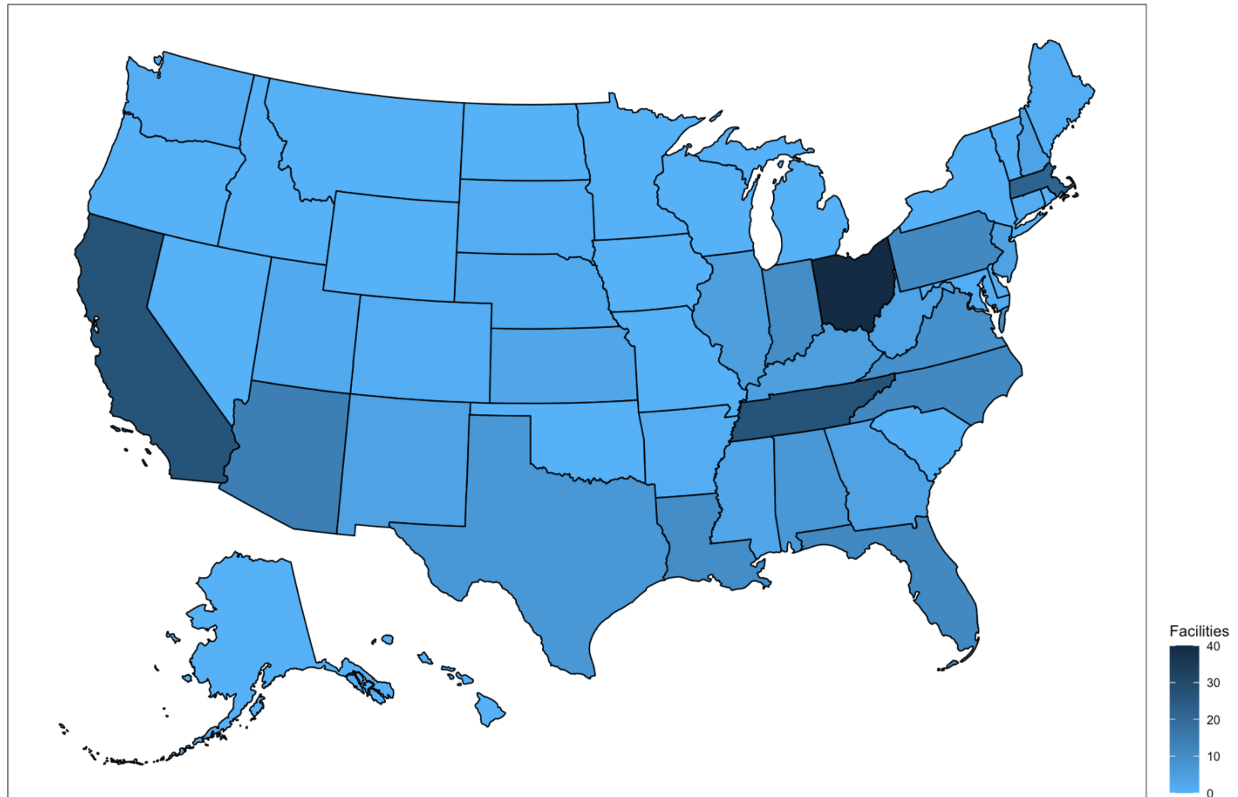
Private Equity Firm	Platform Organization	Number of Facilities
Webster Equity Partners	BayMark Health Services	77
Shore Capital Partners	BrightView Health	28
The Carlyle Group	Odyssey Behavioral Health	9

We found that the largest number of facilities were acquired in Ohio, with a total of 40 facilities. For facilities acquired as part of the original transaction, we find the largest number of facilities in Ohio with 30 total treatment centers. For facilities opened post-acquisition by the acquired entity, we find the largest number of facilities in California with 11 facilities.

Figure 4: States with the Largest Number of Acquired Facilities

States	Number of Facilities	Proportion of Sample
Ohio	40	15.7%
California	27	10.6%
Tennessee	27	10.6%
Massachusetts	22	8.7%
Arizona	14	5.5%
Florida	11	4.3%
North Carolina	11	4.3%
Pennsylvania	11	4.3%
Indiana	10	3.9%
Louisiana	10	3.9%

Figure 5: Number of Acquired Facilities by State, 2013-2023

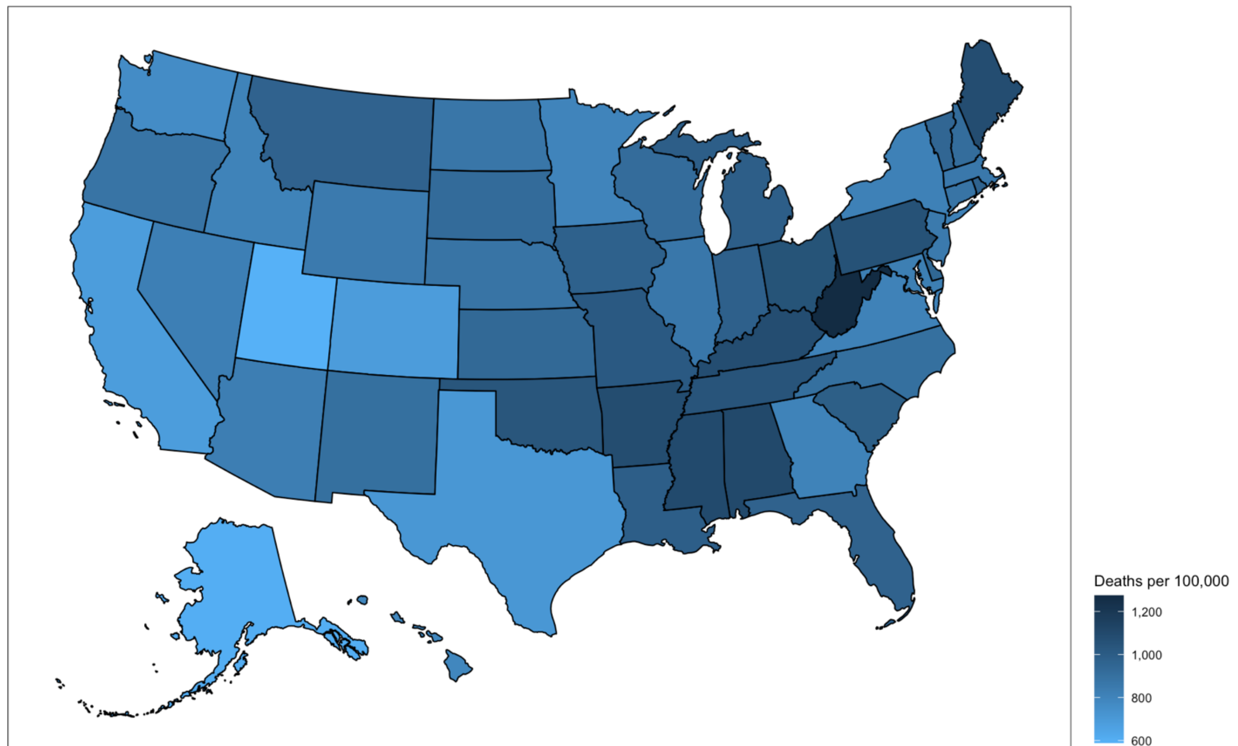


Contextualizing Private Equity Activity

Using the CDC's Wonder database, we found West Virginia to be the state with the highest average crude death rate (per 100,000) from drug overdose.[43] Pennsylvania, Ohio, Tennessee, Indiana, Florida, and Louisiana were among the twenty states with the highest average crude death rates. California, Massachusetts, and Arizona were among the twenty states with the lowest average crude death rates.

[43] "About Underlying Cause of Death, 1999-2020."

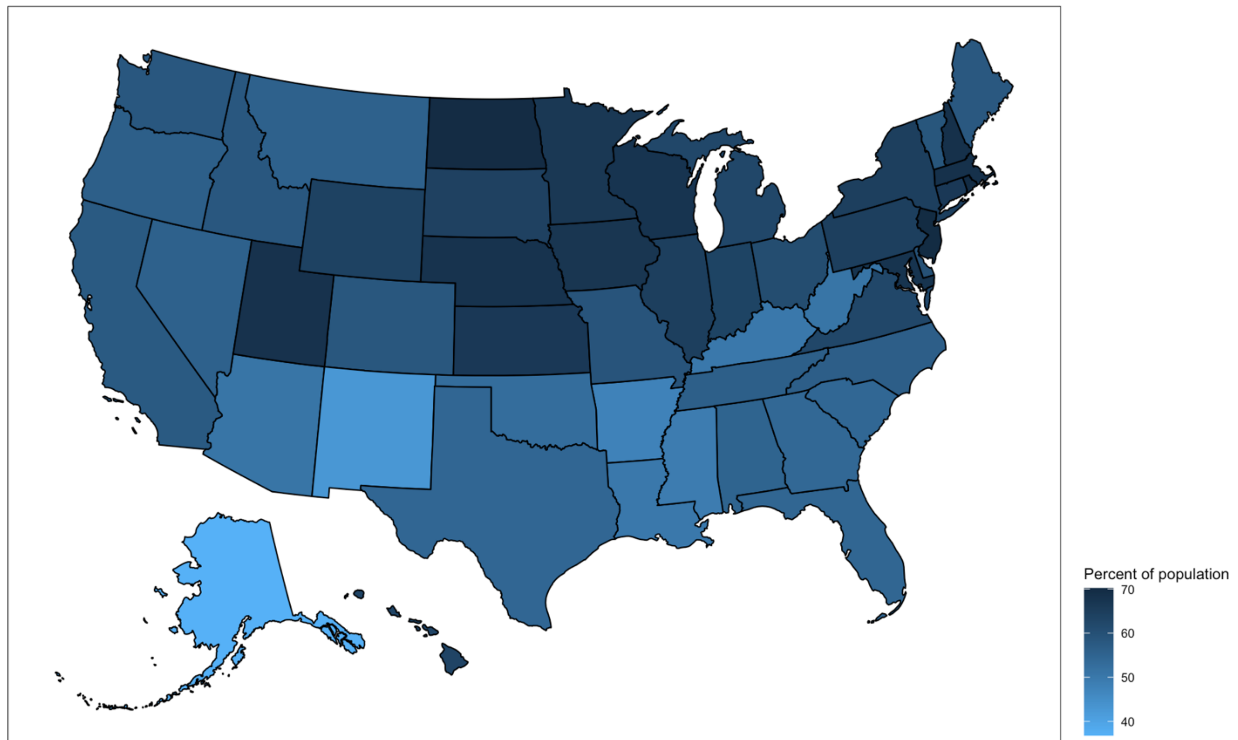
Figure 6: Average Overdose Death Rates by State, 1999-2020



The AHRQ's Social Determinants of Health database uncovered state-level insurance coverage.[44] Massachusetts, Pennsylvania, Indiana, and Ohio are among the twenty states with the highest percentage by population with any private health insurance coverage, while California, North Carolina, Tennessee, Florida, Arizona, and Louisiana are among the twenty states with the lowest percentage.

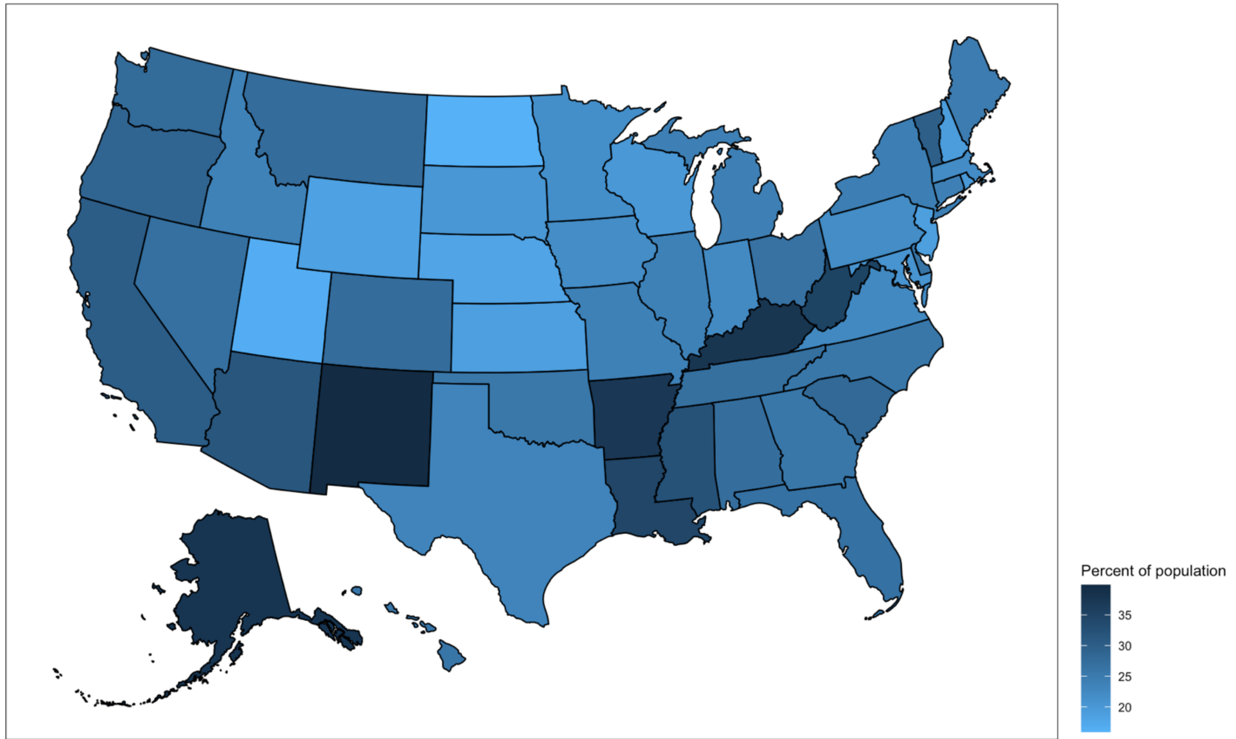
[44] "Social Determinants of Health Database."

Figure 7: Percent of State Population with Any Private Insurance, 2020



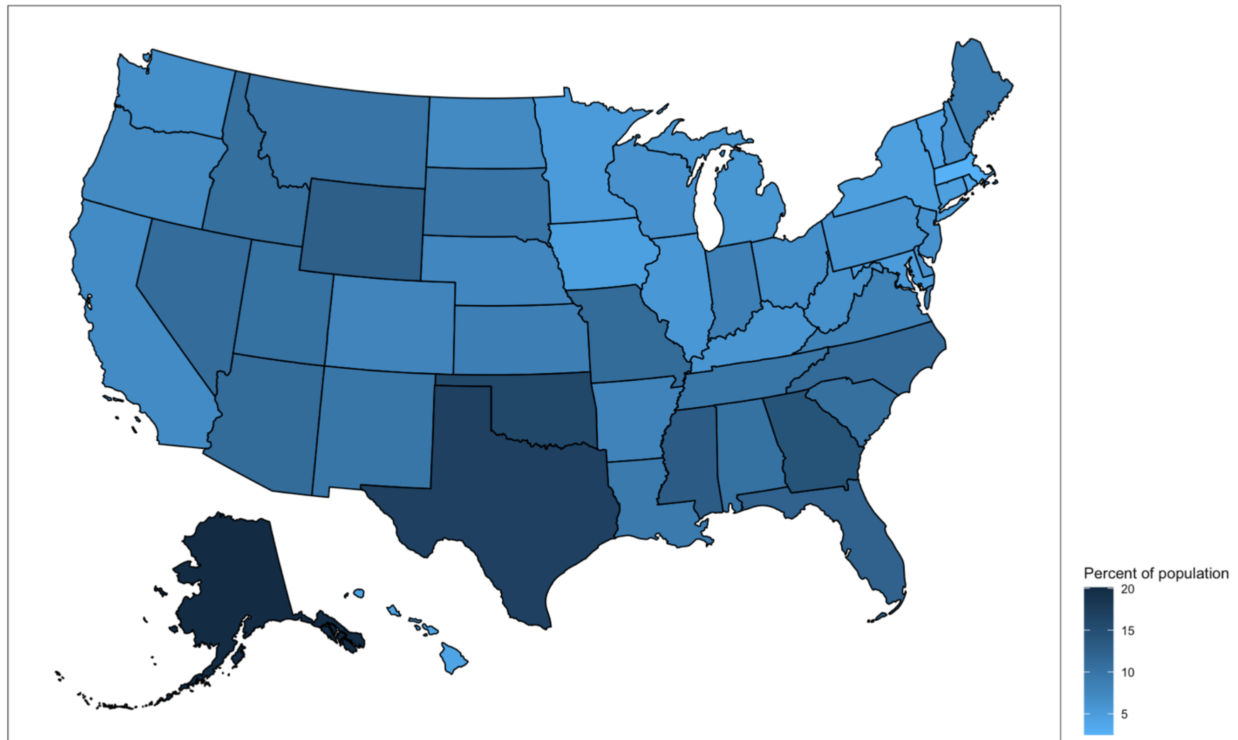
Louisiana, Arizona, California, Tennessee, and Florida are among the twenty states with the highest percentage of the population with only public insurance (Medicare, Medicaid, TRICARE/military, U.S. Department of Veterans Affairs (VA) coverage and other public-only health insurance), while Indiana, Massachusetts, and Louisiana are among the twenty states with the lowest percentage.

Figure 8: Percent of State Population with Only Public Insurance, 2020



Florida, North Carolina, Arizona, Tennessee, Louisiana, Indiana, and California are among the twenty states with the highest percentage of the population that is uninsured. Ohio, Pennsylvania, and Massachusetts are among the states with the lowest percentage.

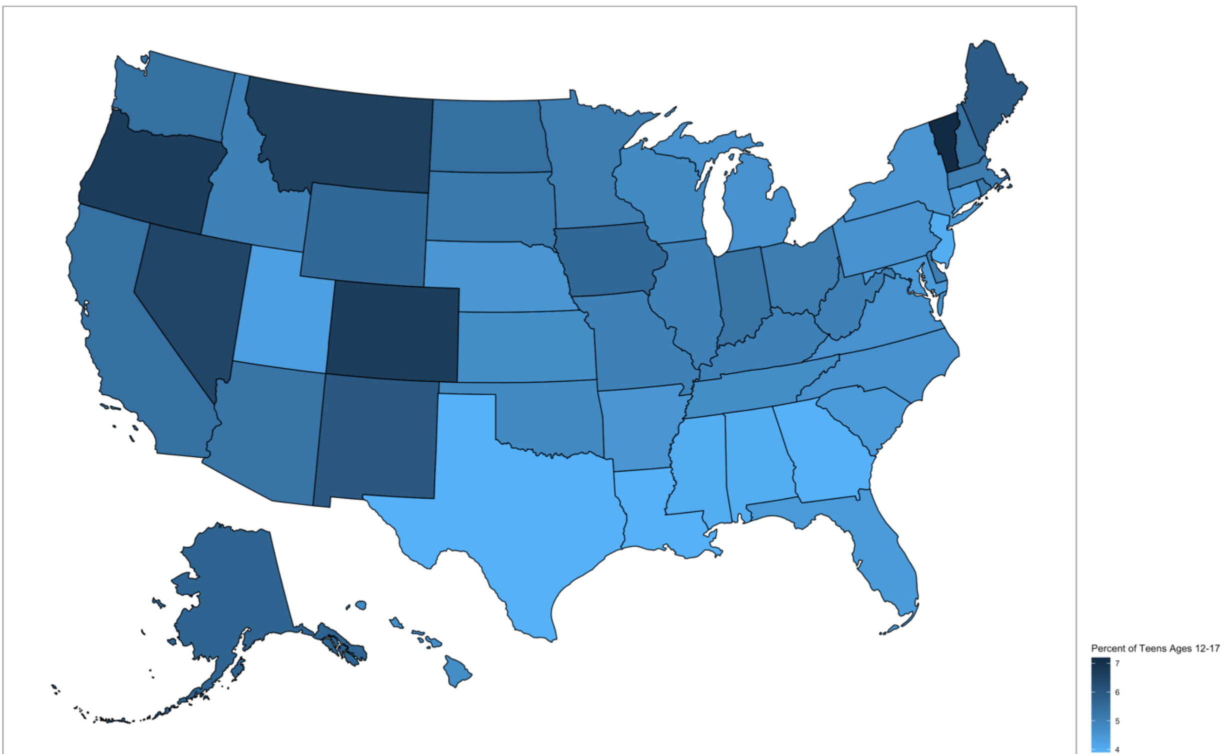
Figure 9: Percent of State Population that is Uninsured, 2020



The KFF Mental Health & Substance Use indicators highlight the need for SUD treatment among teens ages 12-17 based on self-reported data.[45] California, Arizona, and Indiana are among the twenty states reporting the highest percentages of teens experiencing alcohol or illicit drug dependence. Tennessee, North Carolina, Pennsylvania, Florida, and Louisiana are among the twenty states reporting the lowest percentages.

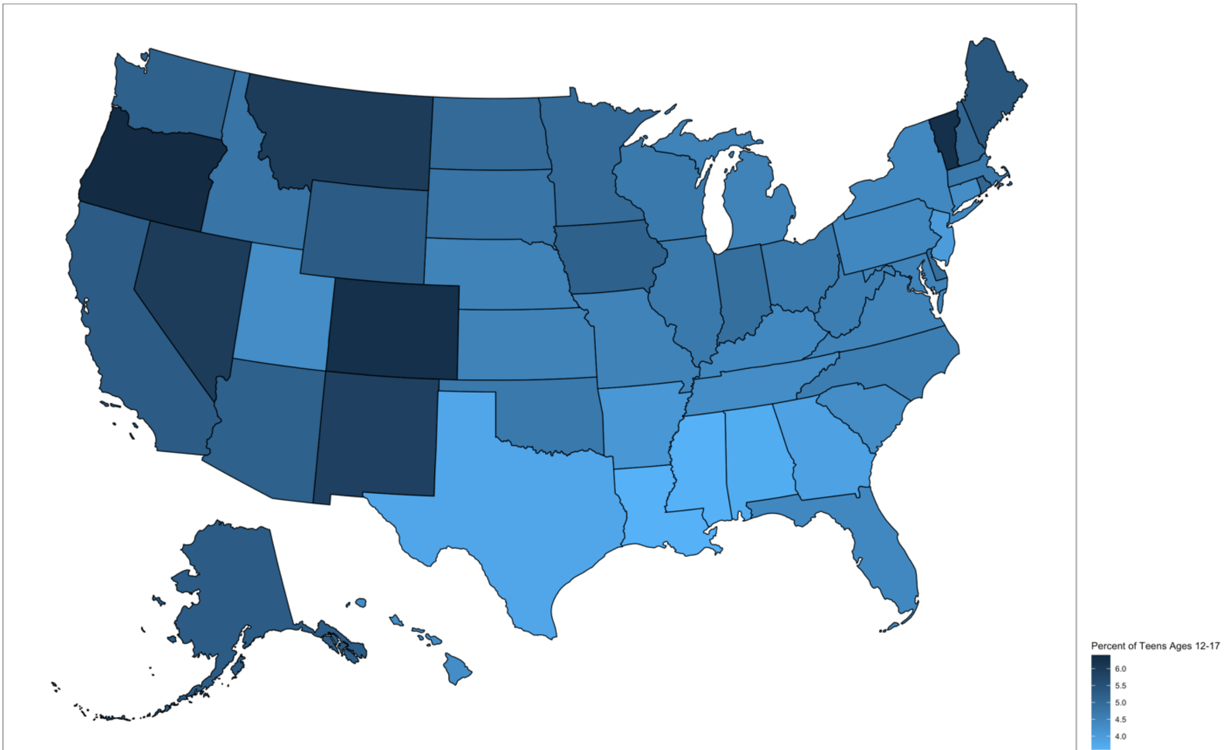
[45] "Mental Health & Substance Use."

Figure 10: Teens Reporting Drug or Alcohol Dependence by State, 2018-2019



Furthermore, California, Arizona, and Indiana are among the twenty states reporting the highest percentages of teens expressing need but not receiving treatment for illicit drug or alcohol use, while Florida, Pennsylvania, Tennessee, and Louisiana are among the twenty states reporting the lowest percentages.

Figure 11: Teens Needing But Not Receiving Treatment for SUD by State, 2018-2019



DISCUSSION

Our results reveal a few patterns surrounding private equity's incentives for investing in addiction treatment centers: high reimbursement, growing demand for services, and the opportunity for consolidation. We observe that private equity firms use platform organizations to buy up independent practices or build add-on practices and consolidate their presence within a state or region. Taking Shore Capital Partners as an example, the firm has acquired almost 30 independent practices through BrightView Health to consolidate across Ohio and beyond. A prime instance of this is BrightView's acquisition of Column Health with its 16 addiction treatment facilities. Consolidation offers private equity firms a pathway for promising returns by eliminating competition. However, concerns over crowding out independent practices and possibly reducing access to care in vulnerable areas must be acknowledged.

The insurance coverage data from the AHRQ's Social Determinants of Health database indicate that the states with a larger share of private equity transactions from the sample tend to have higher rates of insurance of some kind, whether public or private. Four of the ten states with the most private equity-acquired facilities were among the twenty states with the highest percentage by population for any private health insurance coverage. Another five of the ten states were among the twenty states with the highest population for public health insurance coverage. Reimbursement is generally favorable and claims are rarely denied for addiction treatment.[46] With promising financial returns, private equity firms may target states with high proportions of Medicare enrollees or private insurance to reap the reimbursement benefits.

This creates several concerns, one being that private equity firms will target geographic areas with reimbursement potential for expansion rather than areas demonstrating a need for addiction treatment services. Such a practice will further reduce access to care as advantaged demographics are prioritized and independent practices get crowded out. However, we also observe that seven of the ten states with the most private equity facilities were among the twenty states with the highest percentage of uninsured individuals.

From a demand perspective, the CDC and KFF data offer some insights to consider. Six of the ten states with the most private equity facilities were among the twenty states with the highest average overdose crude death rates. Private equity expansion seems to be happening in states where there is a clear need for addiction treatment services, although questions remain surrounding access regarding price and geographic constraints within each state.

For the teen demographic, we observe that three of the ten states with the most private equity facilities were among the twenty states reporting the highest rates of teen drug and alcohol

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[46] Brown, O'Donnell, and Casalino, "Private Equity Investment in Behavioral Health Treatment Centers," 229.

dependence as well as the highest rates of teens expressing a need for but not receiving SUD treatment. This may suggest that private equity is filling a critical gap by making addiction treatment accessible where needed. Still, questions surrounding quality, price, and true accessibility are still left unanswered.

There are considerable limitations to acknowledge with this study. For one, the sample size of both private equity deals and facilities included within those deals was not especially large. We relied on a restricted sample from PitchBook to serve as the foundation for our sample, augmenting the dataset through a piecemeal process of searching the internet for additional facilities and deals. This impeded our ability to understand the impact of missing data – more specifically, how a more expansive dataset would affect our understanding. Having access to a more comprehensive, verified sample would help us draw more insightful conclusions.

Additionally, the state-level data we used to contextualize our private equity acquisition data was limited in recency. The databases we used to determine state-level drug overdose death rates, insurance coverage rates, and other metrics were limited in the most recent data they had available and were not standardized across a particular year. As a result, we compared acquisitions from 2013-2023 to metrics across various years during that period. However, we avoid using extremely dated information and assume that year-to-year fluctuations would not be too severe in magnitude.

But perhaps most significant is the lack of awareness around how clinical outcomes are impacted under private equity ownership. Throughout this analysis, we discuss private equity expanding addiction treatment services in markets demonstrating “need,” yet we have no metrics to evaluate whether those services are competent at meeting patient needs. Patient data is hard to come by, especially for private equity-backed practices. Without patient outcomes data, the

debate over private equity's involvement in addiction treatment is incomplete. If the mission of a healthcare organization is to provide high-quality care that improves patient outcomes, then the core analysis and argument should be centered around the patient, something missing in this study.

CONCLUSION

Consolidation is an inevitable part of the future of American health care. There will always be a focus on reducing excess healthcare spending and improving efficiencies in the addiction treatment space wherever possible. Private equity offers a viable approach to meeting these aims, with the potential to improve operations, facilitate growth, and leverage economies of scale all while creating value for investors. Still, the core dilemma remains that private equity's profit motive over a three- to seven-year horizon may not align with an addiction treatment facility's mission of delivering the best quality care to achieve the best outcomes for patients. Without government intervention, private equity can be a parasitic force, pressuring practices to boost revenues and recklessly shave costs to extract value at the expense of patients and providers.

Regulations on private equity activity in health care can prevent the apparent misalignment in motives between private equity firms and addiction treatment centers from harming stakeholders. CPOM laws should be mandated across all 50 states with specific provisions to protect physicians' autonomy and ensure that patient outcomes are always the core focus of private equity-backed facilities. When a private equity firm acquires an addiction treatment facility, the firm should be held accountable for compliance with regulations on the facility. Enforcement of the Anti-Kickback Statute, documentation standards, fair payment policies, and other practices is essential to ensuring safe, ethical care. Safeguarding patient

access to care through antitrust enforcement is also a valuable precaution. Considering the vast spread in the size of acquisitions – either by dollar amount or the number of facilities involved – the Federal Trade Commission should closely monitor private equity firms to ensure that acquisitions do not exacerbate inequities in the addiction treatment space by driving up prices or wholly crowding out the competition.

With these considerations in mind, it is important to acknowledge the potential for private equity to vastly improve the efficiency of addiction treatment centers. Private equity firms can connect facilities with the capital, infrastructure, and operational acumen to achieve rapid growth. On a macro level, these shifts – if executed well – could help curb soaring spending in the U.S. healthcare system. However, future inquiries must evaluate how private equity intervention in addiction treatment affects clinical outcomes. For the time being, regulators should bolster oversight to ensure that private equity firms prioritize patients alongside profit.

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