The Influence of Private Equity on Eating Disorder Treatment Centers

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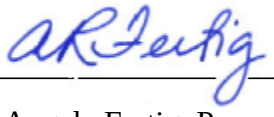	Mar 5, 2024	Mar 13, 2024
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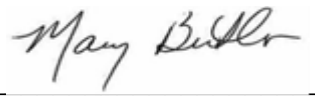		Mar 28, 2024
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Abstract

This systematic literature review analyzes the influence of private equity (PE) firms in the landscape of residential eating disorder treatment. Given the absence of peer-reviewed research on this topic, this review broadens its scope to include an examination of research on residential treatment facilities serving other vulnerable populations, including nursing homes and substance abuse facilities, and the grey literature specifically focused on residential eating disorder treatment. The synthesis of findings aims to provide a comprehensive understanding of the impact of PE firm influence on critical aspects of eating disorder treatment. Following the synthesis, research and policy recommendations are proposed to address the identified issues in the findings.

Key themes explored in this review encompass the systematic preference for patients with specific insurance benefits and lower clinical complexity, discernible shifts in service provision after PE acquisitions, and differences in the quality of care in PE firm-owned healthcare facilities, such as staff-to-patient ratios. This review contributes to advancing the understanding of how the presence of PE shapes the landscape of residential eating disorder treatment by offering valuable insights for policymakers, practitioners, and researchers.

Subject Keywords: eating disorders, eating disorder treatment, healthcare financing, mental healthcare financing, mental health, mental health policy, private equity, healthcare investment, residential treatment, systematic review, treatment center

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Background

Overview

A growing public health concern surrounds the lack of transparency and regulation in the mental healthcare industry. Compounding this issue is the increasing number of eating disorder treatment facilities being acquired by private equity (PE) investors,[1] potentially influencing these facilities' operations.[2] Within this landscape, assessing the quality of care for eating disorders poses a challenge for both regulators and patients. Eating disorders are serious, life-threatening mental illnesses, ranking second only to opioid addiction in mortality.[3] Individuals between the ages of 15-24 with an eating disorder are 10 times more likely to die than their peers.[4] Despite the lethality of eating disorders, there is a dearth of research examining the treatment provided by residential treatment facilities, especially regarding recovery outcomes influenced by different ownership types of facilities. To date, published studies in this area have been methodologically weak. To bridge this gap, this systematic review seeks to understand the impact of PE ownership on the quality of care in residential eating disorder treatment centers.

Mental Healthcare Delivery in the Mid-20th Century

Before the 1950s, people with serious mental illnesses were typically housed in state-run community mental hospitals. However, a pivotal shift occurred in 1963 with the passage of the Community Mental Health Act. The primary aim of this Act was to discharge patients from community mental hospitals and transition them to less restrictive community-based care. Coinciding with the deinstitutionalization movement, Medicare was enacted in 1965. Recognizing that states had previously managed individuals with mental illnesses in state mental health institutions, the federal government aimed to maintain states' involvement in funding and providing mental health care services. Medicare primarily provided coverage for older adults and certain individuals with disabilities instead of specifically targeting individuals with chronic mental illnesses for coverage.

The Medicaid Institutions for Mental Disease (IMD) Exclusion, a federal law preventing states from transferring their mental health costs to the federal government, was also enacted in 1965.[5] The IMD Exclusion was designed to ensure that states retained the responsibility to cover the costs of overnight care for people experiencing mental illnesses, akin to the previous model of state-run community mental health hospitals. The IMD Exclusion imposes limits for

individuals aged 21 to 65 who are covered by Medicaid, preventing them from accessing care at residential treatment centers with more than 16 beds.[6] The continuation of this exclusion in the present day poses a significant challenge for people with eating disorders, as the majority of for-profit residential treatment facilities, regardless of size, do not accept patients with Medicaid or Medicare.[7]

Healthcare Payment in the Late 20th Century

Before the 1980s, the dominant payment model in healthcare was fee-for-service. This model originated in the 1960s when Congress enacted the Medicare and Medicaid programs to support providers caring for the nation's elderly and low-income populations. Under this system, healthcare providers were reimbursed by the government based on the volume of services they provided, irrespective of the actual benefit to the patient.[8] A significant and ongoing drawback of a fee-for-service payment structure is that it has the potential to inadvertently incentivize healthcare providers to deliver more services than necessary.[9]

The healthcare landscape underwent significant changes with the deregulation of the hospital industry in the 1980s, leading to the emergence of for-profit mental health clinics, which were often integrated into expansive hospital chains.[10] During this period, there was a significant surge in service utilization for inpatient mental health hospital admissions.[10,11] In response to rising healthcare costs, managed care was introduced in the 1980s, fundamentally reshaping the organization and financing of healthcare in the United States.[10] Managed care involves entities jointly managing healthcare delivery and financing, assuming a fiduciary responsibility in patient care. Various strategies within managed care have been implemented to control services and costs.[12] Managed care cost control mechanisms include restricting participants to in-network providers, utilization review processes, requiring primary care doctor referrals for specialist visits, prior authorization for services, and fixed provider payments per patient (capitation). While these mechanisms aim to control costs, the fixed capitation payments within managed care can inadvertently create incentives for underservice.[9]

Managed Care and Eating Disorders

In 1993, the Republican-controlled US Congress sought to curb federal spending on mental health and substance abuse services, advocating for the expansion of managed behavioral

healthcare.[12] The roles of case managers and case reviewers were established within managed care to oversee and authorize the use of mental health services, guiding patients toward more cost-effective treatment options[12] and limiting access to costly inpatient treatment.[10] When inpatient treatment was deemed necessary, insurance authorization was often granted for only a few days at a time.[11] Numerous inpatient eating disorder programs subsequently closed, given that there was a declining number of patients with plans willing to cover these services.[11]

Attempts to reduce costs by shortening the length of hospital stays for eating disorder treatment under managed care proved unsuccessful. Anorexic patients frequently relapsed when they were prematurely discharged and then experienced multiple brief hospitalizations instead of a single, more extended stay.[11,13,14] Economic pressures to reduce expensive hospital stays led to the emergence of for-profit residential eating disorder treatment centers in the 1990s.[7,11] Residential eating disorder treatment centers were beneficial to the managed care movement, as they provided ongoing psychiatric support and nutritional rehabilitation at a lower cost per day compared to traditional hospital stays.

The Affordable Care Act

The Affordable Care Act (ACA), enacted in 2010, brought about a transformative shift in healthcare by mandating that insurance plans provide mental health and substance use disorder benefits equivalent to medical benefits. The ACA also abolished discriminatory practices that prevented people with pre-existing conditions from joining health insurance plans, thereby providing crucial protection for a substantial portion of the population. The introduction of these provisions in the ACA triggered significant developments in the healthcare industry, particularly within behavioral healthcare. Consequently, PE firms recognized the opportunities created by the new federal law to invest in the growth of mental healthcare.[7]

Private Equity in Residential Eating Disorder Treatment

The influence of PE expanded significantly after the 2008 global financial crisis, as regulators relaxed regulations that had previously restricted PE firms' activities in an attempt to promote stability in the financial system.[15] Acting as financial intermediaries, PE firms aggregate capital primarily from institutional investors, such as pension funds, endowments, and sovereign wealth funds, and channel these funds into private companies.[16] Healthcare proved to be an

attractive investment opportunity for PE firms, with its inherent feature of maintaining stable consumer demand even during economic downturns.[17]

Until the late 2000s, the residential eating disorder treatment landscape consisted of independently operated facilities, each independently owned and housed at a single location.[18] However, a shift has occurred in recent years, with many prominent residential eating disorder treatment centers now forming multi-state treatment chains owned by PE firms.[1,19] According to the American Academy of Pediatrics, there has been a threefold increase in residential eating disorder treatment programs from 2011 to 2021, with most of the growth occurring within for-profit centers.[20] A market analysis reported that the eating disorder treatment industry is estimated to reach 4.3 billion dollars in revenue in 2023, with an impressive profit margin of 9.8% per treatment facility.[21] This substantial profit margin may be attributable to high barriers to entry, given the specialized nature of eating disorder treatment and possible regulatory requirements. When a PE firm owns a treatment center, the firm has a stake in the facility's financial performance. Therefore, the firm often becomes involved in its management and decision-making processes.

Theory

Potential Advantages of Private Equity in Mental Healthcare

PE investment in healthcare has experienced a tenfold increase between 2004 and 2021.[16] Advocates argue that PE investment in healthcare enhances system efficiency, fosters innovation, and provides financial stability to healthcare facilities, ultimately elevating the quality of care.[2] Financial stability, especially in previously underperforming firms, is a distinct advantage of PE firm ownership. This becomes particularly relevant for smaller establishments, such as locally owned practices, where proprietors may be considering retirement. PE investment can help these facilities maintain their operations and ensure continued access to mental healthcare services in the community. Pursuing profits is not inherently harmful as long as it does not compromise the doctor-patient relationship, perpetuate disparities, or worsen health outcomes.[2]

Securing financial partners can also enable treatment centers to extend their reach, enabling them to serve a larger population.[22] Inadequate access to non-profit treatment facilities often directs patients toward the for-profit sector, making for-profit treatment facilities

necessary.[23] With the heightened demand for mental health care services, especially in the aftermath of the Covid-19 pandemic, PE can be a strategic tool to expand mental health resources at underperforming treatment centers.

Potential Disadvantages of Private Equity in Mental Healthcare

PE firms acquiring healthcare facilities often seek to maximize profits within a short timeframe, typically with the goal of resale within 3 to 7 years.[16] When fund managers focus on selling the investment quickly to liquidate it, heightened financial incentives are created,[16] potentially compromising the quality and accessibility of mental healthcare services. In the context of eating disorders, treatment center cost-cutting measures may lower the quality of care and necessitate more treatment readmissions. Additionally, PE firms' consolidation of healthcare entities may diminish the diversity and prevalence of locally owned treatment facilities. This may result in standardization of practices and a focus on profitability rather than community needs and culturally sensitive care. The proliferation of private, for-profit residential facilities has also contributed to the closure and downsizing of academic medical center programs, which have traditionally served the uninsured or underinsured population.[24] Thus, PE ownership of healthcare facilities may further limit access to mental healthcare for certain populations.

An oversaturation of residential eating disorder treatment facilities in the healthcare marketplace may prompt supplier-induced demand, which typically occurs when information asymmetry exists between suppliers and consumers.[25] In such cases, providers may use their expertise to encourage the overutilization of residential eating disorder care among a subset of patients while neglecting to inform them about other available treatment options. This dynamic may promote higher-end residential care over less intensive outpatient services, even when a higher level of care may offer minimal value to the patient. As eating disorder treatment services owned by PE firms continue to expand in the United States, it is crucial from a public health perspective to assess whether the care provided at these facilities is of high value and evidence-based.[24]

Despite theoretical expectations that PE ownership of mental healthcare facilities will generate market incentives that will lead to a higher quality of treatment, the U.S. healthcare market operates differently from typical markets. The standard economic model assumes that firms have perfect competition, consumers have perfect information and exercise rational choice,

and prices reflect all available information.[26] However, consumers experiencing health emergencies (like those necessitating a high level of care for an eating disorder) are not likely rational nor fully informed, violating the assumptions of economic rational choice theory. Furthermore, in sectors with significant subsidies and vulnerable consumers, such as healthcare, incentives can be misaligned to the point where government subsidy separates revenue from the consumer.[16]

Scope and Key Questions

Eating Disorder Classification and Residential Care

For this review, eating disorders identified in the current Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR)[27] include avoidant/restrictive food intake disorder (ARFID), anorexia nervosa (AN), bulimia nervosa (BN), binge-eating disorder (BED), and other specified feeding or eating disorder (OSFED). A residential eating disorder treatment center is a 24-hour care facility providing round-the-clock behavioral healthcare with less intensive medical supervision than a hospital setting. The residential level of care addresses eating disorders that may not be immediately life-threatening but that have the potential to become so if left untreated.[19] The average length of stay in such a treatment facility is approximately 83 days.[28]

Differentiating Private Equity Centers from For-Profit Treatment Centers

PE firms are financial institutions specializing in investments primarily in privately owned businesses not listed on the stock exchange. These firms typically focus on underperforming businesses or untapped markets, intending to optimize costs and generate profits upon subsequent sales. Despite infusing a tremendous amount of capital into treatment centers, PE firms may resort to cost-cutting measures that may hinder the quality of care and adversely affect patient outcomes. Complex ownership structures pose significant challenges for regulatory oversight agencies and antitrust authorities. With multiple firms potentially owned by the same parent company, transparency is compromised, making it difficult for regulators to fully understand the scope of a firm's assets.[16] Regulatory bodies may also lack the resources necessary to comprehensively monitor and address quality of care standards that arise with PE ownership of healthcare facilities.[16]

Not all for-profit treatment centers are associated with PE investments. For-profit treatment centers not owned by PE firms may be owned wholly or partially by individuals, corporations, or other entities driven by a profit motive. In contrast, PE firm ownership involves institutional investors investing capital into a treatment facility with the expectation of achieving a substantial return. Given the goal of PE firms to maximize revenue within a short time horizon, a key question in this study investigates whether practices at PE firm-owned treatment centers contribute to increased patient readmissions.

Expanded Scope of Literature Review

A preliminary search for literature on the ownership of eating disorder treatment centers suggested that the literature regarding facility ownership and outcomes would be sparse. Because of this, the researcher expanded the scope of this literature review to include other types of residential settings where vulnerable populations receive services. This resulted in the inclusion of literature on the ownership of nursing homes and substance abuse treatment facilities. Given these concerns regarding PE ownership of residential facilities serving vulnerable populations, the following key questions were developed:

1. Do healthcare facilities owned by PE firms that serve vulnerable populations produce a higher readmission rate within 3 years of discharge than treatment centers that are not PE firm-owned?
2. What costs or services changed after a PE buyout of a healthcare center serving a vulnerable population, and what impact did these changes have on patient care?
3. Do healthcare centers owned by PE firms and serving vulnerable populations have different admission practices for admitting patients based on the generosity of insurance plans and clinical complexity?

Expanded Inclusion Criteria for For-Profit Substance Abuse Treatment Centers

Given the paucity of studies on PE investments in substance abuse treatment centers, this review also incorporated studies that compared outcomes between for-profit and non-profit substance abuse treatment centers, irrespective of PE investment. Although PE firm-owned treatment facilities and for-profit, non-PE firm-owned treatment facilities may differ in

transparency, they may exhibit similar behaviors in respect to admission practices and the quality of care provided. Therefore, within the scope of this review, the inclusion of a more extensive selection of for-profit substance abuse treatment centers was designed to encompass a diverse range of residential mental health treatment centers in the literature synthesis.[9] To date, for-profit substance abuse treatment centers serve as the most comparable facilities to eating disorder treatment centers in the available literature. Both types of disorders involve impulsive and maladaptive reinforcing behaviors and have similar dopamine activity in the prefrontal cortex of the brain.[29]

Methods

Literature Search Strategy

A comprehensive search was conducted across PubMed, Econ Lit, and Ovid Medline for observational studies published between January 2000 and September 2023. Additionally, the researcher used a hand search strategy to complement the electronic search of the databases. Search terms were intentionally broad, focusing on the intersection of concepts related to vulnerable populations and PE ownership (see Appendix 1). Studies were identified using a broad PICOT (population, intervention, comparator, outcomes, timing, and setting) approach in light of the research questions. The expansion of PICOT themes used is detailed in Table 1, and the specific search terms that were used are listed in Appendix 1. All identified studies from the databases were imported into the Zotero bibliographic software for deduplication, and a second manual search for duplicates was conducted.

One reviewer screened both titles, abstracts, and full texts for relevance, employing inclusion and exclusion criteria to determine eligibility. Studies were screened first by title, second by abstract, and third according to content. Studies were required to be grounded in empirical data pertinent to PE ownership of healthcare facilities serving vulnerable or marginalized populations. These included facilities that provide hospice care, substance abuse treatment, and eating disorder treatment, as well as nursing homes. Additionally, a hand search of grey literature was conducted to identify source materials about eating disorder treatment that were not peer-reviewed. The temporal focus was also set after the year 2000 to ensure relevance to the current healthcare financing landscape. Studies were excluded if the healthcare facility did

not provide overnight care, if it was outside the United States, or if the study was not published in English.

Table 1. PICOTS for Key Questions on Private Equity Ownership in Vulnerable Populations

Population	-Vulnerable people receiving treatment in residential facilities- substance abuse, eating disorders, nursing homes, and hospice - People with eating disorders in the United States
Interventions/Exposure	-Private Equity (PE) ownership - Generosity of insurance plans for patients that are at PE centers (cherry-picking) - What happens to a facility when it is newly acquired by a PE company?
Comparison	-Privately owned facilities -Non-profit facilities -Pre-PE and post-PE sale
Outcome Measures	- Number of readmissions into a residential treatment center - Assessment of eating disorder severity - Patient satisfaction measures - Structural changes at a treatment facility after a PE sale - Mortality rates in nursing homes and substance abuse treatment centers
Timing of Outcome Assessment	-Number of readmissions every 3 years -Eating disorder severity assessment (EDE-Q 6.0)[30] every 6 months -Mortality rates after 3 years in nursing homes, eating disorder treatment centers, substance abuse facilities
Settings	- Healthcare facilities in the United States treating long-term vulnerable populations, including eating disorders, hospice, substance abuse, nursing homes - Trends in PE ownership in healthcare in the United States

Data Abstraction

The researcher utilized Google Sheets to perform data abstraction. In this process, key information from each study, including details such as study design, population and sample size, comparisons, primary outcomes, study period, study type, and key findings, was systematically

organized. This approach allowed for the structured compilation of essential study details, which in turn allowed for the assessment and comparison of the different research studies.

Data Synthesis

The data were synthesized using qualitative parameters to identify trends in for-profit substance abuse treatment centers and other healthcare facilities owned by PE firms that serve vulnerable populations. Variability was observed across studies concerning methods, populations, sample sizes, and study designs.

Grey Literature Contribution

The topic of PE investment, as it relates to eating disorder treatment, has not yet been extensively explored in the academic literature. The author incorporated grey literature to supplement the findings, including books, court cases, industry reports, conferences, online trainings, magazine articles, and newspaper articles. The synthesis of grey literature also encompassed additional scholarly articles on eating disorder treatment. These scholarly articles were integrated into the grey literature section rather than the systematic literature review findings because, although relevant to eating disorder treatment, they did not specifically analyze the influences of PE firm ownership.

Website Content Analysis

To supplement the literature review for Key Question 3, the researcher conducted a thorough website content analysis focused on 5 prominent eating disorder treatment chains in the United States that are owned by PE firms. Eating disorder treatment center chains were identified using the website www.edtreatmentreview.com.[31] This website is a searchable database that contains reviews of patient experiences at eating disorder treatment centers in all 50 states. To the best of the researcher's knowledge, this independently operated website offers the most exhaustive compilation of eating disorder treatment centers in the defined geographic region covered in this review.

Based on the information from this website, large treatment center chains that had locations in 2 or more states were identified as Monte Nido and Affiliates, The Emily Program/Veritas Collaborative, Alsana (formerly named Castlewood Treatment Center), the

Renfrew Center, the Eating Recovery Center, and the Center for Discovery. Ownership status was verified using PitchBook[32] and official company websites, determining whether each facility was investor-owned or had a different form of ownership. Using this method, it was confirmed that a PE firm did not own the Renfrew Center, as its website indicated ownership by the Meaged Family.[33] Thus, the Renfrew Center was excluded from the sample. Additionally, the treatment center previously referred to as Castlewood Treatment Center, officially registered "Alsana" as a fictitious name with the Missouri Secretary of State in March of 2019.[34, 35] This information was crucial in ensuring the accuracy and relevance of the selected sample for the website content analysis.

After examining the websites of the 5 largest PE firm-owned treatment chains in the United States, the researcher compiled information for all residential facility sites of major eating disorder treatment chains onto a Google Sheet. To maintain a focus on higher levels of care, treatment locations from these 5 chains that solely offered virtual services or outpatient care were excluded. Using Tableau's data visualization software, the researcher crafted a geographical map encompassing all remaining facility sites associated with the 5 major PE firm-owned treatment chains across the United States (see Figure 2). This map of the treatment centers was overlaid with a heat map of each state's poverty status, as determined by the 2022 United States Census Current Population Survey Supplemental Poverty Measure.[36] The primary objective of this process was to shed light on the accessibility and geographic coverage of PE firm-owned treatment centers relative to a state's poverty status.

Search Results

Figure 1 provides a flow diagram of the search and screening results. Of the 5,460 articles initially identified from Econ Lit, Ovid Medline, and PubMed, only 48 articles proceeded to full-text review. The broad search strategy resulted in the majority of articles not specifically addressing PE firm ownership of overnight healthcare settings serving vulnerable populations. Among the remaining articles, 22 were excluded due to a lack of original empirical data, 13 were excluded for focusing on unrelated medical areas, and 3 were excluded because they did not pertain to the 3 key questions. Ultimately, 10 observational studies were included in the final synthesis (see Table 2). One excluded article lacking original data[24] was incorporated into the

grey literature synthesis (see Table 3). Unfortunately, no empirical studies on eating disorder treatment facilities owned by PE firms were found. Refer to Appendix 2 for a list of excluded studies. Refer to Appendix 3 for a heat map of the peer-reviewed literature synthesis.

Figure 1: Flow Diagram of Literature Search Screening

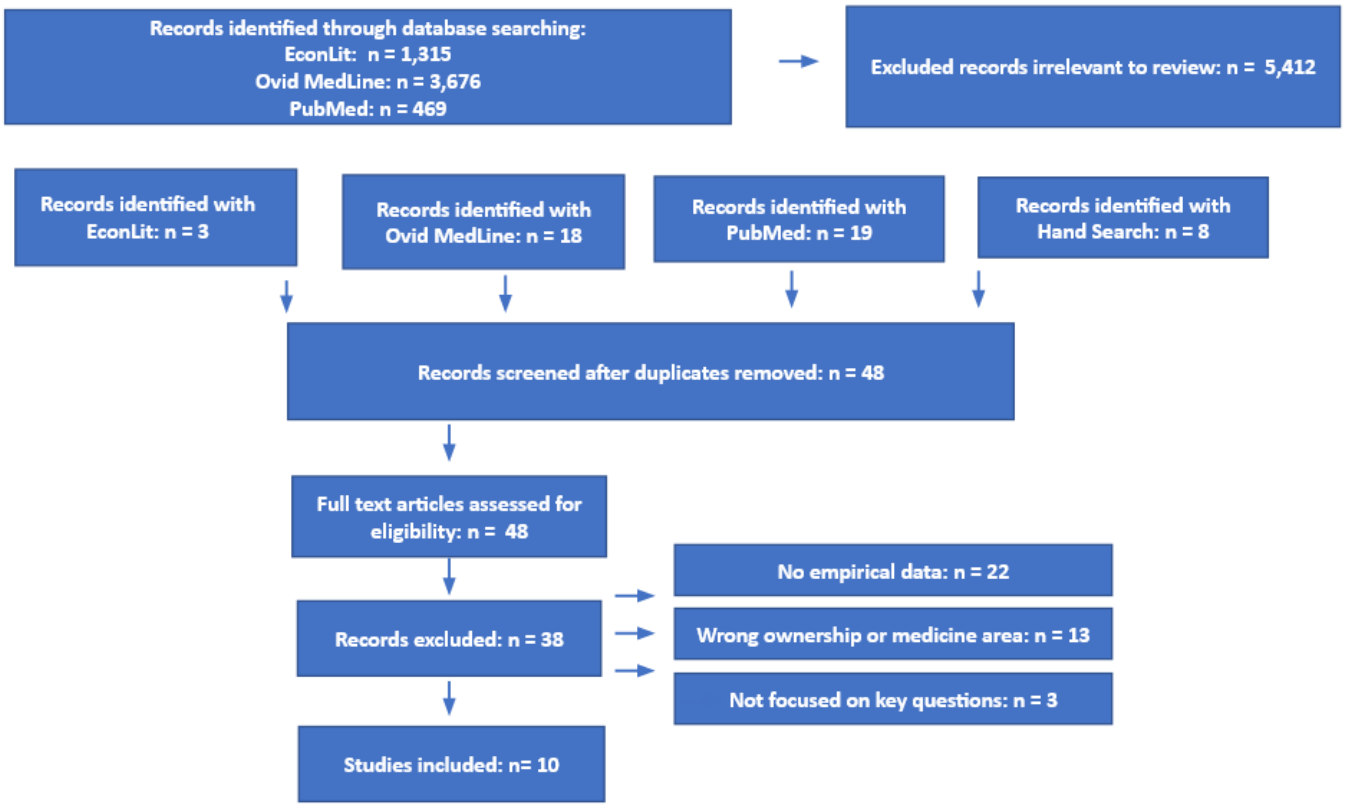


Table 2. Summary of Included Studies

Author (Year)	Comparisons	Study Aim	Study Design	Findings
Rodgers and Barnett (2000)[37]	Public, Non-Profit	To examine differences in staffing levels, treatment access, and funding between for-profit, non-profit, and government substance abuse programs	Multivariate observational study using data from a 1991 National Drug and Alcoholism Treatment Unit Survey (NDATUS)	Private, for-profit programs had less staff than public programs, were more likely to specialize in treating cocaine users, and receive funding from sponsored patients and fees, and were less likely to take Medicaid

Wheeler and Nahra (2000)[38]	For-Profit (Non-PE)	To examine whether investor ownership type impact substance abuse treatment service delivery	Cross-observational study using data from a 1995 national survey of outpatient substance abuse treatment units	Investor-owned facilities had fewer patients who abused crack cocaine, charged higher prices for services, and were less willing to offer care at reduced prices
Stevenson and Grabowski (2008)[39]	For-Profit (Non-PE)	To examine whether a PE purchase of a nursing home impacts health outcomes	Comparison of data from Online Survey, Certification and Reporting (OSCAR) system and Minimum Data Set (MDS) Quality Indicator/Quality Measure (QI/QM) System before and after PE buyouts	No significant differences in quality of care after a PE buyout
Nahra (2009)[40]	Non-Profit	To determine if the organizational objective of profit maximization of for-profit treatment substance abuse facilities influences treatment access and accessibility	Data of outpatient substance abuse treatment (OSAT) with the National Drug Abuse Treatment System (NDATSS) longitudinal study	For-profit treatment units were less likely to provide initial treatment access and had a greater percentage of shortened treatment for clients unable to pay
Harrington et al (2012)[41]	For-Profit (Non-PE)	To compare staffing levels and deficiencies of for-profit nursing home chains before and after PE purchases	Comparison of data from OSCAR system and MDS QI/QM System before and after PE buyouts	Lower nurse staffing in PE firm-owned facilities
Bachhuber et al (2014)[42]	Non-Profit, Public	To compare the services available at for-profit, non-profit, and public opioid treatment programs offering comprehensive services	Cross-sectional analysis of opioid treatment programs offering comprehensive services in the U.S.	Non-profit programs were more likely to offer psychiatric care, social services, and testing for communicable diseases
Huang and Bowblis (2018)[43]	For-Profit	To compare the quality of care of for-profit nursing homes in Ohio with for-profit nursing homes owned by PE firms in Ohio	Data merged from Ohio Medicaid cost reports, OSCAR facility database, and the resident assessment-level information from the MDS	Of the 17 quality measures, 8 measures at PE firm-owned nursing homes were negative, suggesting PE firm-owned nursing homes have equal or higher quality measures
Braun et al (2020)[44]	For-Profit (Non-PE), Public, Non-Profit	To evaluate the performance of PE firm-owned nursing homes on Covid-19 outcomes	Cross-sectional study from the Nursing Home Covid-19 Public File	PE firm-owned homes were less likely to have a 1-week supply of personal protective equipment.

				Staffing shortages did not differ between PE and non-profit nursing homes
Beetham et al (2021)[23]	Non-Profit, Public	To determine if for-profit residential drug treatment programs offer fewer services and are less likely to serve low-income patients than government programs	National audit in which researchers called treatment centers posing as uninsured young adults heroin users seeking admission	For-profit programs offered more rapid admission by non-clinical personnel, more aggressive recruitment, and high upfront cost
Gupta et al (2021)[45]	Non-PE	To determine whether PE investment in nursing homes benefit patients	Comparison of quality measures before and after nursing homes were acquired by PE investors	PE-acquired nursing homes had increased mortality rates, higher prices per day, and increased probability of prescribing antipsychotic medications

Table 3: Description of Grey Literature

Author (Year) & Title	**Type of Literature**	**Source**	**Relevant Findings**
Bernhard (2013) "Castlewood Eating Disorder Lawsuit to be Dismissed"[46]	Newspaper article	*St. Louis Post Dispatch*	Four civil malpractice cases were resolved following allegations of brainwashing and hypnosis at Castlewood Treatment Center
Office of Public Affairs (2013) "Justice Department Settles with Missouri Eating Disorder Clinic Over HIV Discrimination"[47]	Press release	Department of Justice website	Castlewood Treatment Center was found to have violated the Americans with Disability Act by denying admission to a HIV-positive patient
Attia et al (2016) "Marketing Residential Treatment Programs for Eating Disorders: A Call for Transparency"[24]	Scholarly article	Journal of Psychiatric Services	Due to the expansion of for-profit eating disorder treatment after managed care, higher standards must be introduced to protect patients
Goode (2016) "Centers to Treat Eating Disorders Are Growing, and Raising	Newspaper article	*New York Times*	Treatment quality may be sacrificed for profits as companies rush to expand;

Concerns"[48]			marketers cold call providers to fill beds
Serres (2017) "Emily Program Will Narrow Treatment Focus, Drop Roughly 250 Patients"[49]	Newspaper article	*Star Tribune*	The Emily Program abruptly cut hundreds of low-profit patients after a PE-firm buyout
Guarda et al (2018) "A Path to Defining Excellence in Intensive Treatment for Eating Disorders"[7]	Scholarly article	The International Journal of Eating Disorders	There is a lack of consensus on eating disorder care and assessing outcomes; suggestions on how to improve eating disorder care quality
Bernhard (2018)"Castlewood Eating Disorder Center Changes Name Following Malpractice Lawsuits"[50]	Newspaper	*St. Louis Post Dispatch*	Castlewood Treatment Center changes its name to Alsana due to public relations concerns from multiple medical malpractice court cases
Webster (2018) "Eating Disorder Hope's Inaugural Online Conference"[22]	Conference presentation	Online Conference	Conference led by PE investors on the benefits of PE in eating disorder treatment markets
Jackson (2019) "Six Lawsuits Claim Abuse, Safety Lapses at Timberline Knolls Residential Treatment Center"[51]	Newspaper article	*Chicago Tribune*	Timberline Knolls Treatment Center counselor accused of criminal sexual assault
Earnest (2021) "More Charges Filed Against Former Timberline Knolls Counselor"[52]	Online news article	Patch	Timberline Knolls Treatment Center counselor accused of criminal sexual assault
Kjolseth (2021) "Read the Violation Reports for Utah's 'Troubled-Teen' Treatment Centers"[53]	Newspaper article linked to searchable database	*Salt Lake Tribune*	Database with reports of safety lapses at the Avalon Hills Treatment Center
Lester (2021) "Famished. Eating Disorders and Failed Care in America"[19]	Book	University of California Press	Ethnography inside of a residential eating disorder treatment center; chapter on Wall Street investment in eating disorders, and lack of care standards

Arnold (2022) "It Was Hard Enough to Get Treatment for Eating Disorders. Then Private Equity Took Over."[18]	Magazine article	*Mother Jones*	Expansion of PE firm investment in eating disorder clinics after the ACA, patient cherry-picking, decline in patient care
Olson (2022) " Public Crisis, Private Gain: Substance Abuse and Eating Disorders"[1]	Book chapter	Johns Hopkins University Press	Lack of regulation and care standards in PE firm-owned substance abuse and eating disorder treatment centers have led to large profits and lapses in care
Blair (2022) "Does Residential Eating Disorder Treatment Create Barriers to Care?"[54]	Magazine article	*Psychology Today*	Barriers to receiving eating disorder treatment include only taking private insurance and only being located in affluent white neighborhoods
Jane Doe v. Riverside Partners, LLC (2022)[35]	Judicial opinion	Casetext online repository	Court case regarding alleged negligence, fraud by non-disclosure, and civil conspiracy at Alsana (Castlewood Treatment Center)
KMOV (2022) "St. Louis County Eating Disorder Treatment Facility Halting Programs Due to Allegations of Inappropriate Conduct"[55]	Video news segment	KMOV Missouri News Station (CBS Affiliate)	Investigation into a inappropriate conduct among staff and clients at Alsana (Castlewood Treatment Center)
Wang-Hall (2022) "The Politics of Eating Disorders: Psychocentrism & Neoliberalism"[56]	Training	Online training	History on the eating disorder treatment market in the context of neoliberalism
Gupta et al (2023) "Examining Private Equity in Health Care"[16]	Online seminar	University of Pennsylvania Leonard Davis Institute of Health Economics	Quality of care generally declines due to the heightened financial incentives of PE firms
IBISWorld (2023) "Eating disorder clinics in the US-market size, industry analysis, trends, and forecasts"[21]	Industry report	IBISWorld Database	The eating disorder treatment sector has little regulation and large profit margins

Klamann and Wingrter (2023) "Denver's Eating Recovery Center ignored patients' repeated suicide attempts, state investigation finds"[57]	Newspaper article	*Denver Post*	State investigation finds Eating Recovery Center in Denver ignored patients' repeated suicide attempts
Moreno et al (2023) Disparities in access to eating disorders for publicly-insured youth of color: a retrospective cohort study[58]	Scholarly article	The International Journal of Eating Disorders	Patients on public insurance were one-third as likely to receive treatment as patients with private insurance
Wingerter and Klamann (2023) "Eating disorder patients say punitive, threatening methods at Denver Treatment Center left them with new trauma"[59]	Newspaper article	*Denver Post*	Eating Recovery Center is accused of employing punitive and traumatic methods for patients

Synthesis Results

Key Question 1

Do healthcare facilities owned by PE firms that serve vulnerable populations produce a higher readmission rate within 3 years of discharge than treatment centers that are not PE firm-owned?

Key Question 1- Peer-Reviewed Literature Findings

The researcher aimed to address relapse and readmission rates in PE firm-owned residential eating disorder treatment centers. However, no studies were identified that were specifically designed to examine whether eating disorder treatment facilities, substance abuse treatment facilities, or nursing homes owned by PE firms exhibit higher readmission rates within 3 years of discharge compared to non-PE firm-owned healthcare facilities.

Key Question 1- Grey Literature Contribution

The majority of the grey literature consisted of opinion pieces asserting that PE firm-owned treatment centers face significant challenges with oversight, staffing, and delivering high-quality evidence-based care. According to one source from the grey literature, readmission rates

to residential eating disorder treatment centers range from 45% to 77%.[54] The *New York Times* reported that some free-standing private residential treatment centers offer alternative treatment approaches, such as equine therapy or "faith-based" treatment, despite a lack of scientific evidence supporting their effectiveness.[48] Despite this variability in treatment approaches, Cognitive Behavioral Therapy (CBT) remains widely recognized as an evidence-based first-line treatment for eating disorders.[60]

Key Question 1- Grey Literature Discussion

The question regarding readmission rates emerged from the researchers' concern that if PE firms showed a compromised quality of care, this may lead to increased patient readmissions. Although readmission following eating disorder treatment is a common occurrence, it remains unclear whether this is attributable to the severity of the eating disorder or misalignment between patient needs and treatment program characteristics.[61] Due to the dearth of studies in the existing literature specifically addressing readmissions in relation to the ownership status of treatment centers, Key Question 1 was unable to be addressed within the available peer-reviewed literature. The absence of such studies does not necessarily indicate the non-existence of this phenomenon; rather, it highlights an area that requires further exploration.

One grey literature source suggested that although readmission rates at residential eating disorder treatment centers are notably high, patients may still perceive their care positively, emphasizing comfort and hospitality rather than evidence-based treatment methods.[24] Additionally, the eating disorder treatment industry lacks consensus regarding the most effective methods for assessing treatment outcomes and program performance.[7] Concerns arise as the majority of research on residential treatment is authored by the treatment centers themselves, posing potential biases and significant methodological flaws.[18, 62] Thus, studies produced by treatment centers may inadvertently misrepresent patient satisfaction and clinical outcomes, leading to a potential distortion of the overall picture.

Key Question 2

What costs or services changed after a PE firm buyout of a healthcare center serving a vulnerable population, and what impact did these changes have on patient care? (Table 4 shows the relevant key findings.)

Table 4. Summary of Costs Cut

Author (Year)	Study Aim	Study Design	Findings
Rodgers and Barnett (2000)[37]	To examine differences in staffing levels, treatment access, and funding between for-profit, non-profit, and government substance abuse programs	Multivariate observational study using data from a 1991 National Drug and Alcoholism Treatment Unit Survey (NDATUS)	Private, for-profit programs had less staff than public programs
Harrington et al (2012)[41]	To compare staffing levels and deficiencies of for-profit nursing home chains before and after PE purchases	Comparison of data from the Online Survey, Certification and Reporting (OSCAR) System and Minimum Data Set (MDS) Quality Indicator/Quality Measure (QI/QM) System before and after PE buyouts	Lower nurse staffing in PE firm-owned facilities
Bachhuber et al (2014)[42]	To compare for-profit, non-profit and public opioid treatment programs offering comprehensive services	Cross-sectional analysis of opioid treatment programs offering comprehensive services in the U.S.	For-profit programs less likely to test for communicable diseases, offer psychiatric services, and offer social services
Huang and Bowblis (2018)[43]	To compare the quality of care of for-profit nursing homes in Ohio with for-profit nursing homes in Ohio owned by PE firms	Data merged from Ohio Medicaid cost reports, OSCAR facility database, and the resident assessment-level information from the MDS	More PE residents with physical functioning decline, bowel or bladder incontinence, and falls with injury; fewer non-PE facilities residents with lower contractures, and higher rates of antipsychotic use
Braun et al (2020)[44]	To evaluate the performance of PE firm-owned nursing homes on Covid-19 outcomes	Cross-sectional study from the Nursing Home Covid-19 Public File	PE firm-owned homes were less likely to have a 1-week supply of personal protective equipment. Staffing shortages did not differ between PE and non-profit nursing homes
Gupta et al (2021)[45]	To investigate whether PE investment in nursing homes benefits patients	Quasi-experimental design using a difference-in-differences approach	Nurse staffing levels decreased and antipsychotic medication use increased

Key Question 2- Peer-Reviewed Literature Findings

Peer-reviewed literature findings on residential facilities serving vulnerable populations highlight that nursing homes owned by PE firms exhibited less favorable quality of care compared to nursing homes with other ownership structures. Braun et al[44] discovered that, during the Covid-19 pandemic, nursing homes owned by PE firms were more likely to face shortages in personal protective equipment, such as medical gowns and facemasks, compared to nursing homes with different ownership structures. Additionally, Gupta et al[45] reported an 11% increase in the amount billed for a 90-day short-term nursing home treatment episode in PE firm-owned facilities, coupled with a 10% increase in the 90-day mortality rate. Thus, a price increase and a simultaneous decline in patient outcomes were associated with PE firm-owned nursing homes. Similarly, Harrington et al[41] found a decrease in nursing home nurse staffing levels after a PE firm acquired the facility. Huang and Bowlbis[43] presented mixed results regarding cost-cutting in nursing homes owned by PE firms. However, their study has a limited geographical scope, focusing solely on facilities in the state of Ohio.[43]

As described in the methods section, the lack of literature on PE firm-owned substance abuse residential treatment centers prompted an evaluation of for-profit substance abuse centers instead, irrespective of PE ownership. This expanded focus aimed to capture literature related to a client base more comparable to those with eating disorders than nursing homes. Compared to public and non-profit substance abuse treatment centers, for-profit substance abuse treatment centers were less likely to offer comprehensive services.[37,42] Bachhuber et al[42] showed that for-profit substance abuse treatment programs were significantly less likely to provide infectious disease testing, psychiatric services, and social support than non-profit and public programs. Similarly, Rodgers and Barnett[37] found that private, for-profit substance abuse treatment programs had fewer staff on site than public programs.

Key Question 2- Peer-Reviewed Literature Discussion

The literature review on PE firm-owned nursing homes and for-profit substance abuse facilities reveals a concerning pattern of cost-cutting measures that may impact the quality of care across various healthcare sectors, including the treatment of eating disorders. A growing body of evidence suggests that PE firm-owned healthcare facilities, in their pursuit of improved efficiency and financial stability, may also be implementing cost-cutting measures that ultimately

result in a lower quality of care. Driven by a focus on maximizing profitability, PE firms often cut labor costs and engage in unsustainable business practices.[18] This profit-driven approach may lead to cost-cutting measures affecting less visible aspects of care, such as neglecting staff training or adjusting the staff-to-patient ratio, while simultaneously emphasizing superficial aspects of care, such as creating resort-like environments.[1]

Key Question 2- Grey Literature Contribution

The landscape of eating disorder treatment represents a substantial industry, valued at 4.3 billion dollars and projected to experience growth in the next 5 years.[21] Staffing is the most significant cost for an eating disorder clinic, accounting for approximately 51% of its revenues.[21] Between 2017 and 2020, PE firm-run Alsana (Castlewood Treatment Center) achieved a nearly ten-fold increase in its EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization) and expanded from 5 programs to 15 programs in just 3 years.[63] The Denver-based, PE firm-run Eating Recovery Center generated an estimated revenue of 198.2 million dollars in 2023, yielding profits of 21.6 million dollars and achieving a profit margin of 10.9%.[21] Despite its impressive profit margin, a state investigation uncovered several safety lapses at the Eating Recovery Center in Denver. Two patients attempted suicide over 15 times in several days, leading to the facility receiving 5 citations for a failure to ensure patient safety.[57] An article in the *New York Times* asserted that many residential eating disorder treatment programs lack the staff expertise to manage emergencies or provide treatment for coexisting medical or psychiatric conditions.[48]

Timberline Knolls Treatment Center in Illinois, owned by PE firm Acadia Healthcare,[64] faced 6 lawsuits in 2019. Over a dozen patients and staff approached the *Chicago Tribune* with accusations of substandard treatment and abuse at the facility.[51] Allegations claimed administrators failed to protect individuals from a counselor charged with sexual assault and abuse. In the case of *Jane Doe v. Riverside Partners, LLC,*[35] Alsana (Castlewood Treatment Center) was accused of keeping labor costs down by employing fewer people and paying specialized treatment professionals as 1099 contractors to avoid providing benefits. Such practices led to negligent staff training and hiring, resulting in care practices that deviated from ethical standards. Notably, unlicensed therapist Brittany Gibbs was reported to have engaged in

inappropriate behavior, asking her patient to follow her on TikTok and even taking her to Gibbs's house, where alcohol was served.[35]

A search of the grey literature for eating disorder treatment centers that were for-profit but not PE firm-owned revealed mixed findings. Avalon Hills Eating Disorder Treatment Center in Utah is a private, for-profit facility that is still owned by its original founder.[1] *The Salt Lake Tribune's* database of incident reports and inspections for teen treatment centers in Utah chronicled lapses in patient care at Avalon Hills.[53] The facility experienced issues such as the mishandling of background check information and delaying reporting of a self-harm incident to the Utah Office of Licensing.[53] This researcher was unable to find any grey literature that addressed the key research questions for The Renfrew Center, a for-profit but non-PE firm-owned facility owned by the Meaged Family.[33] Although The Renfrew Center was the focus of a 2006 HBO documentary film titled "Thin," the film focused on patients' struggles to achieve eating disorder recovery, not on the relationship between patient outcomes and the ownership structure of the treatment center.[65]

The grey literature was also screened for non-profit residential eating disorder treatment centers. Treatment facility names obtained from the website www.edtreatmentreview.com[31] were entered into the IRS Tax Exempt Organization database[66] to determine which eating disorder treatment centers claimed non-profit status. After it was determined which treatment centers were non-profit, treatment centers not offering a residential level of care were omitted from the sample. Specific non-profit facilities with a residential treatment component identified through this method were the Crossroads Eating Disorder Treatment Center in Maine,[67] the Laureate Psychiatric Clinic and Hospital in Oklahoma,[68] the Melrose Center in Minnesota,[69] Rogers Behavioral Health in Wisconsin,[70] and the Sheppard Pratt Center for Eating Disorders in Maryland.[71] However, this researcher could not find publicly searchable grey literature on lapses in patient care or changes in service provision based on ownership status for the identified non-profit facilities.

Key Question 2- Grey Literature Discussion

The aftermath of the managed care movement has transitioned the objective of eating disorder treatment from "effective care" to "efficient care."[56] As treatment centers have rushed to expand, there is a growing concern that the pursuit of profit may compromise the quality of

treatment.[48] Allegations against the PE firm-owned Eating Recovery Center in Denver further underscore this concern, with reports of inadequate staff-to-patient ratios compromising care quality and eliciting punitive measures as a remedy for insufficient staffing.[57] Incidents reported by the Colorado Department of Public Health and Environment, such as patients leaving the facility without permission, point to potential shortcomings in supervision within the center, highlighting the tension between cost-cutting measures and patient well-being.[57] Disturbingly, a staff member at the Eating Recovery Center reported to the *Denver Post* that when a patient attempted suicide, therapists were prohibited from telling children's parents that there were not enough staff members on site to watch their kids.[57]

Additionally, the abuse allegations at Timberline Knolls Treatment Center highlight the lack of patient safety and proper oversight in another PE firm-owned eating disorder treatment centers. Monte Nido and Affiliates, a treatment center founded in 1996 that attracted PE investors in 2012, has also been susceptible to PE influence. The center's founder, Carolyn Costin, separated from the facility in 2017, expressing a desire for independence from investor influence.[1] Carolyn Costin's departure raises questions about the leadership and values of PE firm participation in eating disorder treatment centers. The case of *Jane Doe v. Riverside Partners, LLC* [35] also highlights quality of care issues that arise when profit interests contribute to negligent training and hiring of staff. Examining both the peer-reviewed and grey literature, a recurring theme emerges that cost-cutting measures are often implemented to enhance operational efficiency and financial stability, yet they can inadvertently compromise patient care.

Comparable quality of care issues may still be present in eating disorder treatment centers that are not under PE firm ownership. The limited representation of grey literature focused on non-profit and non-PE firm-owned for-profit treatment centers may be attributed to several factors. Due to the constraints of time and cost associated with obtaining incident and inspection reports from all facilities across the United States, the researcher faced limitations in thoroughly exploring grey literature beyond searching news sources and the internet. Another contributing factor to the absence of grey literature for non-PE firm-owned facilities may be that smaller establishments, serving fewer individuals and having fewer locations, might attract less attention in the news cycle. This reduced visibility may also contribute to the scarcity of relevant grey literature. Alternatively, the lack of easily accessible grey literature may also suggest a positive aspect – that these settings experience fewer lapses in patient care.

Case Study: Alsana (formerly Castlewood Treatment Center)

An example of poor service provision and insufficient oversight in a PE firm-owned treatment center, is provided in the malpractice and abuse allegations surrounding PE firm-owned Alsana in St. Louis, Missouri (Castlewood Treatment Center). Despite Commission on Accreditation of Rehabilitation Facilities (CARF) accreditation,[72] the treatment center settled 4 malpractice lawsuits in 2013, alleging disturbing practices including the use of hypnosis and the manipulation of patients into forming false memories of severe child abuse.[46] All court cases were resolved outside of the courtroom with associated gag orders.[1] Additionally, a fifth case was brought by the federal government, which accused the facility of violating the Americans with Disabilities Act by denying an HIV-positive patient admission.[47]

In an attempt to distance itself from its contentious history, Castlewood Treatment Center publicly adopted the name Alsana in 2018,[35,50] by officially registering the name as a fictitious entity with the Missouri Secretary of State in 2019.[34,35] This rebranding raises ethical questions, as it appears to be an effort to potentially obscure the facility's troubled past from prospective clients.[50] Alsana's tumultuous narrative continued into 2022, when the facility faced additional abuse allegations of inappropriate sexual conduct by direct care employees with clients, prompting a temporary suspension of all new client admissions at the St. Louis location.[55] Ongoing concerns remain about the PE firm-owned facility's commitment to ensuring a safe and therapeutic environment, despite the faciltiy's CARF accreditation.

Key Question 3

Do healthcare centers serving vulnerable populations and owned by PE firms have different admission practices for admitting patients based on the generosity of insurance plans and clinical complexity? (Table 5 presents a summary of the key findings.)

Table 5. Summary of Admission Practices

Author (Year)	Study Aim	Study Design	Findings
Rodgers and Barnett (2000)[37]	To examine differences in staffing levels, treatment access, and funding between for-profit, non-profit, and government substance abuse programs	Multivariate observational study using data from a 1991 National Drug and Alcoholism Treatment Unit Survey (NDATUS)	Private, for-profit programs were more likely to specialize in treating cocaine users and receive funding from sponsored patients and fees, and were less likely to take Medicaid
Wheeler and Nahra (2000)[38]	To determine if investor ownership type impacts substance abuse treatment service delivery	Cross-observational study using data from a 1995 national survey of outpatient substance abuse treatment units	Investor-owned facilities had fewer patients who abuse crack cocaine, charged higher prices for services, and were less willing to offer care at reduced prices
Nahra (2009)[40]	To assess whether the organizational objective of profit maximization of for-profit substance abuse treatment facilities	Data from outpatient substance abuse treatment (OSAT) units used with the National Drug Abuse Treatment Survey (NDATSS) longitudinal study	For-profit facilities were less likely to provide initial treatment access for those unable to pay; targeted more lucrative financial markets
Huang and Bowblis (2018)[43]	To compare the quality of care of for-profit nursing homes in Ohio with for-profit nursing homes in Ohio owned by PE firms	Data merged from Ohio Medicaid cost reports, Online Survey, Certification and Reporting (OSCAR) facility database, and the resident assessment-level information from the Minimum Data Set (MDS)	PE-owned homes are less likely to have a dementia special care unit, more likely to have fewer Medicaid and more Medicare residents
Beetham et al (2021)[23]	To determine if for-profit residential drug treatment programs offer fewer services and are less likely to serve low-income patients than government programs	National audit where researchers called treatment centers posing as uninsured young adult heroin users seeking admission	For-profit treatment centers had higher costs, active patient recruitment, and offered to admit frequently without clinical evaluation; more likely to screen out patients with comorbidities
Gupta et al (2021)[45]	To investigate whether PE investment in nursing homes benefits patients	Quasi-experimental design using a difference-in-differences approach	Having a higher share of Medicare patients associated with being targeted for a PE buyout

Key Question 3- Peer Reviewed Literature Findings

Nursing homes acquired by PE firms in the peer-reviewed literature observed similar highly selective admission practices with a preference for lower clinical complexity and more generous insurance plans. Huang and Bowblis[43] discovered that PE firm-owned nursing homes were less likely to have a dementia special care unit, and they had fewer residents with cognitive impairment and fewer residents on Medicaid. Gupta et al[45] found that regions with a higher share of Medicare patients were targeted for more nursing home acquisitions.

As detailed in the methods section, given the scarcity of literature on PE firm-owned substance abuse centers, an examination of for-profit substance abuse centers was undertaken to capture the residential care setting experience of a vulnerable population more similar to patients with eating disorders than to nursing home residents. The findings in the literature focusing on for-profit substance abuse treatment centers suggest that these facilities are more likely to screen out patients with co-occurring mental health disorders and those with prior treatment experiences.[23,40] Beetham et al[23] found that for-profit substance abuse treatment programs offered admission over the phone, even before any clinical evaluation, at a higher frequency than non-profit programs. For-profit drug treatment programs were also more inclined to use more aggressive marketing techniques to encourage patients to come to their facility, such as running search engine advertisements, offering to contact the prospective patients' families, suggesting that the prospective patient ask family members to help finance their services, providing transportation to the facility, promoting luxury amenities, and continuing to contact prospective patients by text messages and phone calls after the initial assessment.[23] Similarly, Nahra[40] discovered that for-profit substance abuse treatment centers were less likely to provide treatment to financially risky patients and targeted markets in more affluent areas.

Key Question 3- Peer-Reviewed Literature Discussion

These findings of highly selective admission practices and aggressive recruitment tactics raise alarm about the influence of PE investment in healthcare markets serving vulnerable populations. Admission practices within PE firm-owned nursing homes consistently display a systematic preference for patients with lower clinical complexity and more generous insurance coverage. Medicare, designed to assist primarily elderly or disabled individuals, allocates higher reimbursement rates to ensure adequate compensation for the specialized care and services

provided in short-term skilled nursing facilities. Medicaid is aimed at supporting low-income individuals and families and offers comparatively lower reimbursement rates. This discrepancy in reimbursement structures may shed light on why regions with a higher proportion of Medicare patients become targets for increased nursing home acquisitions.

For-profit substance abuse treatment facilities also opt for less clinically complex patients. These patients require fewer resources for their treatment, presenting less financial risk and proving more profitable for the treatment facility. The available evidence suggests that for-profit substance abuse facilities often specialize in treating cocaine use rather than crack cocaine use. This strategic focus aligns with a pursuit of stable revenue, given that patients who abuse cocaine typically have better financial resources than patients who use crack cocaine.[37,38]

Key Question 3- Grey Literature Contribution

The examination of grey literature reveals striking parallels among nursing homes, substance abuse treatment facilities, and residential eating disorder treatment. A consistent pattern emerges across all 3 sectors, revealing that highly selective patient admission practices are often correlated with ownership type. States with mental health parity laws and higher reimbursement rates for eating disorders also seem to attract a larger number of eating disorder treatment centers.[21]

A notable case highlighting a preference for treating patients at more highly reimbursed levels of care is exemplified by The Emily Program, a well-established entity in the field of eating disorder treatment. The Emily Program underwent a drastic shift in service provision following its acquisition by a PE firm, in 2017. Despite its original outpatient-focused approach rooted in the principles of its founder Dr. Dirk Miller,[73] The Emily Program abruptly terminated the majority of its outpatient services in January 2018, after the acquisition by Triple Tree Investment Bank.[49] Another case involving selective patient recruitment tactics was found at the Eating Recovery Center national treatment chain. According to a report by *The New York Times,* the PE firm-owned Eating Recovery Center deployed a team of over 20 “professional relations liaisons” to engage in nationwide clinician outreach to help market its program.[48] It was also reported that The Eating Recovery Center imposes admission quotas on its intake counselors that resemble a commission-driven sales structure.[48]

Key Question 3- Grey Literature Discussion

Parallels between trends in the substance abuse literature and eating disorder grey literature highlight a business strategy that focuses on the development of services with higher reimbursement rates, targeting financially stable patients. The PE acquisition of The Emily Program in 2017, characterized by the abrupt termination of care for hundreds of outpatients to expand residential sites, highlights a financial incentive to change service provision driven by higher reimbursement rates for residential care.[49] The business decision to drop hundreds of long-standing outpatient clients who relied on services to stay in remission from their eating disorders reflects a cream-skimming approach in health economics. Cream skimming involves healthcare companies capturing the most profitable segment of their client base while redirecting less profitable or harder-to-serve clients to other providers. The strategy employed by The Emily Program aligns with broader trends of healthcare facilities shifting their focus from outpatient care to more lucrative inpatient services after acquisition by a PE firm.[16]

Within the realm of PE firm-owned eating disorder treatment facilities, there is an emphasis on upscale residential care designed to cater specifically to self-pay and commercially insured patients who often travel from out of state, instead of comprehensive outpatient services for local, publicly insured individuals.[35] Moreno et al[58] reported that patients with private insurance are 3 times more likely to receive recommended eating disorder treatment compared to those with public insurance. Olson[1] shed light on this disparity, theorizing that one factor may be that PE firm-owned treatment facilities offer resort-like amenities, which may attract more privately insured patients to their facilities.

Ethical concerns are also apparent in the practices employed at the PE firm-owned Eating Recovery Center. The professional relations liaisons at the Eating Recovery Center use aggressive marketing strategies to attract patients to their facility, which can potentially influence clinicians to refer patients to the Eating Recovery Center for reasons other than clinical appropriateness.[48] Numerous controversial marketing strategies previously utilized by the pharmaceutical industry have found their way into the practices of eating disorder treatment facilities. These strategies include cultivating referral relationships with providers, offering small gifts, free trips to tour their facility, and meal payments.[24] Such practices not only blur ethical boundaries but also risk compromising the integrity of patient care by potentially prioritizing financial incentives over clinical needs.

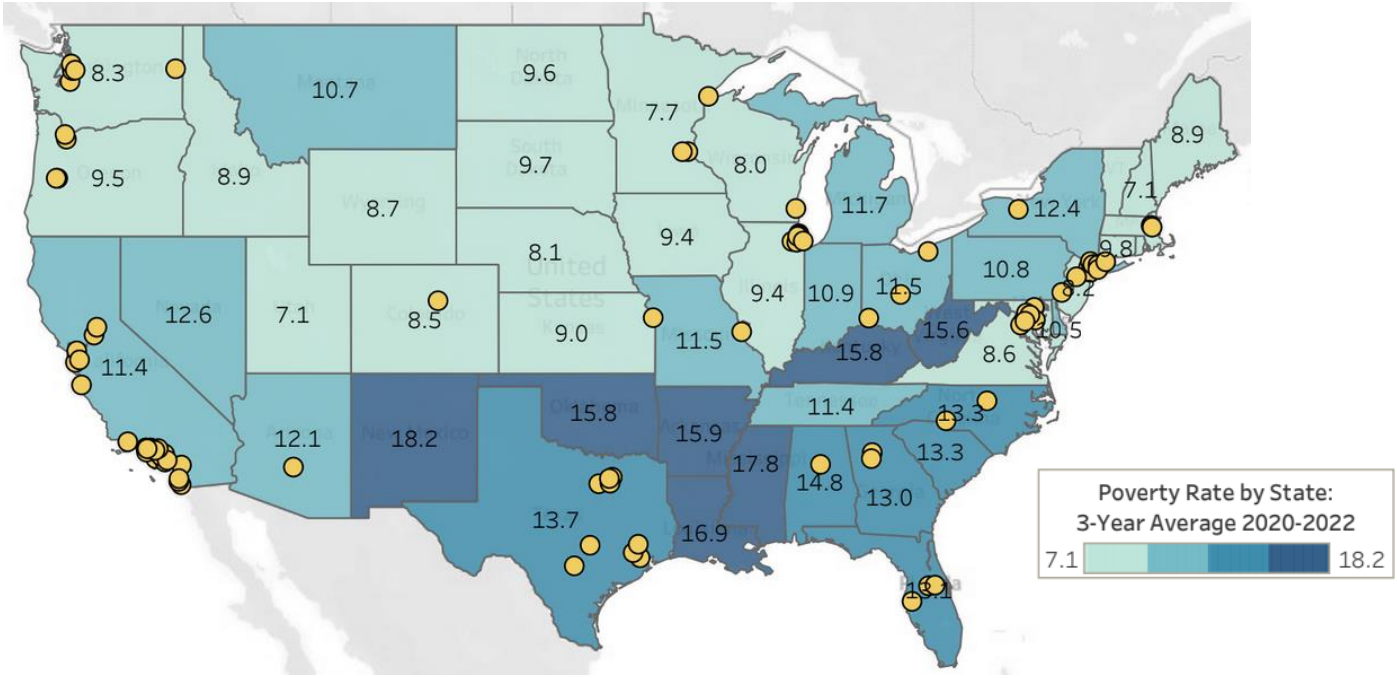
Key Question 3- Website Content Analysis Findings

The correlation between the percentages of individuals living below the poverty line and the geographical distribution of 5 prominent PE firm-owned eating disorder treatment chains in the United States is illustrated in Figure 2. The analysis revealed that the 5 largest PE-owned eating disorder treatment centers had operational facilities in 22 states (see Table 6 and Figure 2 for detailed findings). Notably, the 7 states with the highest poverty levels – New Mexico (18.2%), Mississippi (17.8%), Louisiana (16.9%), Arkansas (15.9%), Kentucky (15.8%), Oklahoma (15.8%), and West Virginia (15.6%)[36] – lack PE firm-owned eating disorder treatment centers from of the country's 5 largest treatment chains (see Table 6).

Table 6. Locations of the Five Largest PE Firm-Owned Eating Disorder Treatment Centers

Chain (Including Mergers)	Founding Location and Year	Expansion States	Owners in 2023
Accanto Health (parent company of the Emily Program & Veritas Collaborative)	Minnesota (1993)[73]	Georgia, Minnesota, North Carolina, Ohio, Pennsylvania, Virginia, Washington[74]	Vestar Capital Partners[75]
Monte Nido and Affiliates (Oliver-Pyatt Centers, Clementine, Walden, Rosewood)	California (1996)[76]	Arizona, California, Florida, Georgia, Illinois, Maryland, Massachusetts, New Jersey, New York, Oregon, Texas, Washington[77]	Revelstoke Capital Partners[78]
Center for Discovery & Discovery Behavioral Health, Inc.	California (1997)[79]	Arizona, California, Connecticut, Florida, Georgia, Illinois, Kansas, Maryland, New Jersey, New York, Oregon, Texas, Virginia, Washington, Wisconsin[80]	Webster Equity Partners[81]
Alsana (registered as a fictitious name for the Castlewood Treatment Center)	Missouri (1999)[82]	Alabama, California, Missouri[83]	Riverside Company[84]
Eating Recovery Center & Insight Behavioral Health Centers	Colorado (2008)[85]	California, Colorado, Florida, Illinois, Maryland, New York, Ohio, Oregon, Pennsylvania, Texas, Washington[86]	Apax Partners and Oak HC/FT[87]

Figure 2. Comparison of States' Percentage of People Below the Poverty Line and Locations of Five Prominent PE Firm-Owned Eating Disorder Treatment Center Chains



Note: Private equity (PE) firm-owned treatment center locations are indicated by yellow dots

Key Question 3- Website Content Analysis Discussion

The findings in Figure 2 prompt questions about the accessibility of residential eating disorder treatment across the United States. Despite the stereotypical perception of eating disorders primarily affecting young, white, affluent females, these disorders cut across all races, genders, and socioeconomic statuses. A 2014 study found that below-median annual household income was associated with an increased prevalence of extreme dieting, binge eating, and purging.[88] Food insecurity, which can be seen in areas with higher poverty levels, can amplify the risk of an eating disorder, often associated with stress, irregular eating patterns, weight change, depression, and body dissatisfaction.[89] Even though individuals living in poverty face an elevated risk of developing an eating disorder, PE firm-owned treatment facilities tend to avoid establishing clinics in these areas. The higher proportion of uninsured and Medicaid patients in such regions may be a factor in this finding. This failure to establish PE firm-owned treatment centers in states with higher poverty levels reinforces the recurring theme of highly selective admission practices, indicating a preference for PE firm-owned eating disorder treatment centers to treat more financially profitable and stable patients.

Discussion

Challenges in Research Compound PE Ownership Concerns

While observational studies have inherent limitations and potential biases, they remain crucial in offering valuable insights, particularly when ethical or practical constraints preclude experimental designs that expose individuals to potentially harmful interventions. Additionally, PE firms carefully protect their financial and business structures, creating difficulties for external parties, including researchers, to access detailed information about their practices. Regulatory complexities in the healthcare industry, coupled with the secrecy surrounding PE firms, create hurdles for researchers. In the specific context of PE firm ownership in eating disorder treatment centers, the absence of peer-reviewed research necessitates a reliance on the grey literature to understand emerging trends and concerns. The grey literature, comprising reports, magazines, trainings, judicial opinions, articles, and studies outside traditional academic channels, is valuable for uncovering real-world practices and observations in a field that may not have been extensively explored or validated through traditional peer review processes.

PE firm-ownership of mental health safety net services transforms safety nets into profit-driven entities, thus eroding the safety net. The intrusion of non-medical, unlicensed corporate entities into eating disorder treatment centers may compromise the quality and accessibility of treatment. When a PE firm controls a treatment center, its business and financial structure may become vulnerable to practices prioritizing revenue generation instead of best treatment practices.[35] There may be a general reluctance within the eating disorder community to acknowledge the potential harms of treatment facility PE firm ownership. When attention is brought to parts of the market that are not working, it may be negatively perceived as an attempt to restrict access to care that advocates have spent decades fighting hard to achieve. This hesitancy is noteworthy, especially given the historical challenges faced by individuals with eating disorders in obtaining adequate insurance coverage and access to treatment.

The denial of payment for eating disorder treatment by Blue Cross Blue Shield resulted in the tragic death of Anna Westin in 2000. In the aftermath of Anna Westin's death, a 5-year review of eating disorder claims by the Minnesota Attorney General was conducted to ensure health plans adhered to contracted coverage.[90] The late 2000s saw the monumental legislation of the Mental Health Parity and Addiction Equity Act of 2008, which ensured parity between

mental health and substance use disorder benefits and medical and surgical benefits. In 2010, the narrowly passed ACA expanded mental health parity requirements across various health insurance plans. The objective of this systematic literature review was to examine the extent to which PE firm-ownership of eating disorder treatment centers hinder treatment access or facilitate equitable high-quality care for individuals with eating disorders.

Universal Issues Within Eating Disorder Residential Treatment

It should be acknowledged that residential eating disorder treatment faces significant challenges, irrespective of ownership status. Residential eating disorder treatment is not only under-researched,[91] but also has the potential to be traumatic for patients.[92] Eating disorder treatment centers often may resort to coercive methods, originally developed for young patients, to achieve behavior compliance.[93] Coercive measures at residential eating disorder treatment centers may include but are not limited to, nasogastric tube feeding, constant observation, involuntary treatment, guardianship orders, enforced liquid nutritional replacements, off-label use of medications for weight gain, surveillance at meals and in the bathroom, movement restriction, visitor restrictions, limited phone time and contact with the outside world, room searches, body searches, forced activities instead of rest, disallowance of private belongings, and behavioral contracts.[94, 95] Although coercive methods may result in temporary weight gain, patients frequently experience relapse after being discharged.[93] Some patients may comply with coercive methods to expedite their discharge, and then subsequently develop a fear of seeking out future mental healthcare services.[95]

Weight restoration, an aspect of treatment aimed at improving medical stability, also introduces challenges beyond its intended benefits. Restoring weight may induce extreme psychological and gastrointestinal discomfort, creating an experience that may be perceived as more punishing than rewarding.[96] After discharge, patients may find themselves feeling vulnerable to relapse, when the psychological aspects of their eating disorder were not adequately addressed.[97] People with eating disorders are also often blamed for their condition more than people with other mental health disorders.[19,98] External stakeholders, such as managed care companies, often determine whether a patient is suffering enough and if they are “worthy” of their care being authorized.[19] Viewing eating disorders solely as a medical condition and neglecting the behavioral aspects of the illness can inadvertently subject patients to trauma and

shame, fostering a perception that they are not “sick enough,” which may hinder the effectiveness of their treatment.[4]

There is a growing recognition that coercive healthcare practices may lead to harm, even though some providers may advocate for their necessity, citing their role in preserving patient safety.[92] Often, healthcare providers express criticism of coercive practices, yet they often attribute the responsibility of these policies to someone higher up in the organization.[99] While designed for the benefit of the patients, the rigid application of rules may be perceived as paternalistic and exacerbating power dynamics between patients and staff.[95,99] Given the lethality of eating disorders, striking the right ethical balance between benefits and potential harms is imperative in the context of involuntary eating disorder treatment.[100]

Limitations

The design of this study is subject to several limitations. Time and cost constraints limited the analysis of the grey literature. While efforts were made to explore news sources, a comprehensive examination of incident and inspection reports from all U.S. facilities was not feasible, potentially impacting the researcher's ability to capture the full spectrum of issues at residential eating disorder treatment centers. Furthermore, the reliance on a single researcher for screening articles and data analysis introduced the potential for bias, as subjectivity and personal bias may have influenced the selection and extraction process. To address these limitations, researchers must do more rigorous assessments in the future to improve confidence in the findings.

Another significant limitation stems from the difficulty of obtaining eating disorder claims data, mainly due to its non-public nature. The Medicaid IMD Exclusion and the reluctance of PE firm-owned treatment centers with fewer than 16 beds to accept public insurance impeded access to relevant data. Consequently, this limitation hindered a comprehensive analysis of the impact of PE ownership in the eating disorder treatment sector. Conducting future research on PE firm-owned residential eating disorder treatment programs may face continued challenges due to the privacy surrounding ownership and payment practices at these facilities.

Furthermore, the observational studies obtained in the literature synthesis also have limitations. While observational studies are often more practical due to lower costs and resource

requirements than experimental studies, they are subject to a high risk of bias. Many observational studies utilize secondary data sets, potentially introducing sampling bias. Additionally, variations in how facilities define and deliver services may have impacted data comparability. Peer reviewed literature based on data collected in the 1990s or 2000s may not be fully generalizable to more recent periods. The absence of previous research on PE involvement in eating disorder treatment posed a challenge in contextualizing the study within existing evidence. Despite the extensive research conducted on eating disorders in the context of epidemiology, there remains a considerable gap in understanding healthcare utilization, treatment costs, and cost-effectiveness.[61]

Future Research Recommendations

Future research is needed to replicate methods used in studying nursing homes and substance abuse treatment centers within the context of residential eating disorder treatment. A comparative analysis between PE firm-owned residential eating disorder treatment centers and those with other ownership models should be conducted, examining patient selection criteria, services for financially risky patients, and recovery and readmission rates. Investigating whether centers owned by PE firms have more restrictive admission criteria or exclude patients with limited financial resources or complex medical conditions can inform policy development and promote more equitable treatment access. The availability and quality of services offered in PE firm-owned residential eating disorder treatment centers should be evaluated and compared to other ownership models. This includes examining evidence-based treatments, multidisciplinary care teams, and specialized patient services. Conducting future research using rigorous design and analysis methods is imperative to allow for causal inference and enhance confidence in the reliability of findings.

Policy Recommendations

Overview

Policymakers must urgently address the pressing need for enhanced regulation and oversight within eating disorder treatment. As found in this systematic literature review, current practices within PE firm-owned treatment facilities may often prioritize revenue generation over quality of care, posing significant risks to the well-being of individuals seeking help. A market

analysis of the eating disorder treatment industry identified this sector's low regulation as a market advantage that fosters an environment ripe for unchecked growth.[21] Such an unregulated landscape jeopardizes the quality of care and has broader implications for the community. The economic impact of eating disorders extends beyond individual suffering, contributing to the indirect cost of sick days, reduced productivity in the workplace, years of life lost, and disability-adjusted life years.[61] Additional regulation for eating disorder treatment centers may encounter resistance, given that access to residential eating disorder treatment has also been instrumental in saving many lives. Nevertheless, the accessibility of treatment is not uniform for all sufferers, and the maximization of quality care and patient safety is not consistently ensured.

Establish an Agency for Oversight of Eating Disorder Treatment Centers

Accreditation Limitations

The lack of standardized guidelines within residential treatment may also expose patients to unproven approaches that deviate from evidence-based care.[62] Treatment centers that claim to deliver CBT often stray into unevidenced integrationist approaches, leading to a wide variation in the actual therapy provided.[101] This variation challenges the reliability of the “CBT” label, creating ambiguity for patients and families.[101]

While obtaining accreditation through bodies like the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) and the Commission on Accreditation of Rehabilitation Facilities (CARF) serves as an essential initial step, their accreditations predominantly emphasize structural and procedural measures, neglecting emphasis on evidence-based treatment.[7,57] Using data for planning positive client and program outcomes is prioritized without specifically mandating particular treatments or interventions.[102] Moreover, steep accreditation fees amounting to 995 dollars per application and 1,670 dollars per surveyor per day for CARF, and a non-refundable deposit of 1,700 dollars in addition to annual fees for JCAHO,[103] may make maintaining accreditation less of a financial burden for PE firm-owned treatment facilities, irrespective of whether evidence-based treatment methods are being utilized.

In a study involving 18 prominent residential treatment centers for eating disorders, only 27.8% of the programs received JCAHO accreditation. In this same study, licensing varied from communal living licenses to foster care licenses, and group home licenses, with 1 program lacking any license.[28] Another study on over 8,000 child and adolescent mental health facilities

in the United States found that accreditation status was not significantly associated with facilities using CBT.[102] Thus, it is questionable if the current oversight bodies have the capacity to effectively safeguard vulnerable consumers within this healthcare marketplace.[24]

Patient Safety Lapses and Limits of Accreditation

In addition to the CARF-accredited Alsana (Castlewood) case study highlighted in the grey literature under Key Question 2, significant patient safety lapses have also occurred in other accredited PE firm-owned eating disorder treatment centers. Despite having JCAHO accreditation, the Eating Recovery Center in Denver,[104] was subject to a state investigation that uncovered alarming incidents, including 2 patients attempting suicide over 15 times in several days, leading to the facility receiving 5 citations for their failure to ensure patient safety.[57] The Timberline Knolls Treatment Center, accredited by JCAHO,[105] had 6 patients report being criminally sexually assaulted by their therapist, Michael Jacksa, between December 2017 and June 2018.[52] These additional examples underscore that treatment center accreditation does not have the same robust safeguards to ensure patient safety and quality of care that an oversight agency may provide.

Increase Accountability and Transparency

To enhance transparency and accountability of eating disorder treatment, lawmakers may consider establishing a dedicated oversight agency tasked with formulating specific regulations and guidelines governing these facilities. Currently, the absence of a centralized organizational entity leads to a lack of treatment center enforcement mechanisms and accountability for residential eating disorder treatment centers. An eating disorder treatment oversight agency may require treatment facilities to publish outcome studies on their websites. Given the interest of various third-party payers in financial outcomes, several programs have already initiated the collection of outcome information post-discharge. However, a lack of consensus exists regarding relevant and valid documentation of treatment outcomes.[7,106] These studies are often funded by the facility itself and are devoid of peer review and may misrepresent patient satisfaction and clinical outcomes. One proposal may be to have a third-party entity without any financial relationships may assume responsibility for funding and conducting these studies. In addition to outcome studies, an oversight agency may require residential treatment centers to disclose any

patient safety lapses publicly. This level of transparency is essential for holding facilities accountable for patient safety and well-being.

Additionally, an oversight agency may require and enforce the publication of financial relationships. Although many healthcare companies are listed on the public exchange and therefore required to file financial records with the Securities and Exchange Commission (SEC), PE firm-owned eating disorder treatment centers are not required to file, making it challenging to find publicly available data on financial relationships. Understanding financial relationships may help patients understand potential conflicts of interest that may prioritize financial interests over patient well-being. By promoting transparency in financial relationships by requiring and enforcing related filings, an oversight agency could ensure that patient welfare rather than financial considerations drive treatment decisions.

Value-Based Bundled Payment Models

Prospective Per-Diem Payment and Fee-for-Service

Residential eating disorder treatment centers typically use a prospective per diem payment system, where the payment due is determined based on a fixed amount for each day of treatment. The average cost of eating disorder residential treatment amounted to 1,237 dollars per day in 2019.[107] The prospective per diem payment model, akin to fee-for-service, offers simplicity and predictability for healthcare providers.[108] Payment models that bear similarities to fee-for-service afford healthcare providers financial protection in scenarios where patients deviate from recommended treatment plans and providers are also not held responsible for poor outcomes.[109] While advantageous in certain aspects, fee-for-service models have drawbacks, including a focus on volume of care over quality, potential overuse of services, and limited care coordination.[109]

The current volume-based residential treatment payment system rewards providers for process measures such as treatment completion but may not improve long-term patient recovery outcomes.[110] Treatment centers may be financially incentivized to delay discharge, even when further treatment at the facility is of low value. Additionally, there are no financial incentives to coordinate a patient's follow-up and outpatient care. Economically, fee-for-service volume-based models can contribute to deadweight loss in healthcare spending, where the allocation of resources in the healthcare market may deviate from the optimal level due to incentives for

prioritization of the quantity of services provided over their actual value or necessity. This can lead to overutilization of healthcare services, inefficient resource allocation, and a lack of focus on preventive or cost-effective measures, ultimately resulting in higher overall healthcare costs and diminished economic efficiency.

Implement an Episode-Based Payment Model for Eating Disorder Treatment

The passage of the ACA in 2010 allowed the creation of some value-based care initiatives, including Medicare's episode-based payment initiatives, such as hospital value-based purchasing programs. Within this value-based payment model, financial rewards are tied to positive patient outcomes rather than the sheer number of services rendered.[8] Episode-based payment models cover the entire continuum of care, not just the more highly reimbursed levels of care. The adoption of these value-based payment models can enhance care coordination, as providers have a financial incentive to coordinate care, which is essential for successful transitions after residential care.[111] Continued engagement in treatment after residential care can reduce treatment readmissions, lower healthcare costs, and improve recovery outcomes.[112]

Following in the footsteps of Medicare's hospital value-based purchasing programs, insurers may consider episode-based payment mixed with pay-for-performance indicators for eating disorder treatment. This payment approach may encompass services preceding a treatment stay, services during the actual treatment period, and services post-discharge, such as prescription drugs, counseling, and other wraparound services.[112] This creates a financial incentive for treatment centers to maintain ethical practices and prioritize the best interests of the individuals seeking treatment for the full continuum of care. This shift in focus from the duration of a patient's stay to an individual's actual recovery outcomes reduces the likelihood of cost-cutting measures that might compromise quality of care. Furthermore, value-based payment models transfer more risk to providers, instilling greater accountability for patient outcomes.[113]

Contractual obligations within these agreements must be structured to deter treatment centers from selectively accepting only less complex cases. Risk-adjusted rates would need to be implemented to ensure that programs are not discouraged from accepting more challenging cases that may necessitate additional resources.[114] This adjustment may involve compensating providers based on the severity of the eating disorder, comorbid conditions, or a patient with a history of multiple unsuccessful treatment attempts. However, risk adjustment can be complex if

individual-level patient data is insufficient to fully account for client differences. To mitigate perverse readmission incentives, the length of the bundled payment may be designed to consider the frequency of repeat residential treatment events.[112] This approach helps align financial considerations with the goal of sustained recovery. To uphold the integrity of value-based payment models, regulators may require regular monitoring and audits of treatment center practices. This proactive approach is crucial for identifying patterns of cherry-picking and ensuring that reimbursement adequately covers the expenses associated with providing comprehensive and effective care.

Lower Reporting Requirement Threshold for the Hart-Scott-Rodino Antitrust Improvement Act

To enhance regulatory oversight and address potential issues related to market consolidation in the healthcare sector, Congress may consider lowering the reporting requirements of the Hart-Scott-Rodino Antitrust Improvement Act of 1976. Currently, this Act mandates that healthcare mergers surpassing a specified threshold (indexed to GDP) must be reported to both the Federal Trade Commission (FTC) and the Department of Justice (DOJ). Upon meeting this threshold, the merging parties must submit a pre-merger notification and undergo a waiting period before finalizing the merger. This waiting period allows the FTC and the DOJ to assess the potential impact of a merger on competition and consumers.[115] This proactive approach aims to prevent market consolidation and potential violations of antitrust law. As of 2023, the reporting threshold for healthcare transactions was set at 111.4 million dollars.[116] Acquisitions valued below this threshold allow firms to evade antitrust authorities, resulting in what is commonly known as stealth consolidation, where market power is amassed by firms buying up smaller practices.

In 2023, the PE firm-owned Eating Recovery Center treatment chain was valued at 198.2 million dollars.[21] This treatment chain currently has multiple facilities with various levels of care, including 9 residential treatment centers operating in 5 states.[117] By lowering the reporting threshold for the Hart-Scott-Rodino Antitrust Act, treatment facilities growing to the size of the Eating Recovery Center would be subject to mandatory reporting to the FTC and the DOJ. Lowering or eliminating the reporting threshold for healthcare mergers is essential to enable regulators to monitor treatment center mergers more effectively. Regulatory oversight may deter

providers from engaging in practices that prioritize profit margins over patient welfare. By taking such measures, Congress can contribute to a more transparent and competitive healthcare landscape that reduces eating disorder treatment disparities.

Employee Unionization Initiatives

In the absence of comprehensive industry regulations, employees of eating disorder treatment facilities may also pursue unionization efforts. The collective bargaining power gained through unionization has the potential to elevate employee wages, making these centers more attractive to a higher-skilled workforce. In a study by Larsen and Terkelsen,[95] mental health professionals conveyed a sense of dependence on an unalterable system, even while they expressed concerns about perpetuating harm to patients. Enhanced working conditions for mental health professionals can positively impact patient care, as providers may collectively advocate for care that aligns more closely with their values. Moreover, employee unions can play a vital role in championing regulatory standards within the mental health sector, advocating for improved working conditions, including, for example, an increased staff-to-patient ratio.

The path to unionization in the mental health industry has historically encountered challenges. High employee turnover in treatment facilities poses a significant obstacle, as employees may hesitate to invest time and effort in a unionization campaign if they do not plan to remain at the same treatment center for an extended period. Additionally, student placement partnerships, like the Emily Program's collaboration with the University of Minnesota, can further complicate unionization efforts. In such partnerships, students may feel compelled to refrain from engaging in union activities for fear of jeopardizing their graduation requirements or future career prospects.

A case exemplifying the complexities of employee unionization is the attempted unionization at the National Eating Disorders Association (NEDA),[118] a non-profit eating disorder advocacy organization. Despite successfully filing for an election with the National Labor Relations Board and achieving victory to unionize on March 17, 2023, the momentum was short-lived. Just 4 days after the election results, the employees who sought unionization were summarily dismissed and replaced by a chatbot.[119] The potential for retaliatory actions by employers in the eating disorder treatment industry may serve as a deterrent for other eating disorder care providers from participating in future unionization initiatives.

Conclusion

The results of this systematic literature review suggest that PE firm ownership of eating disorder treatment centers may encourage prioritizing profits over patient well-being, resulting in negative implications for patient care. The American Academy of Pediatrics has encouraged families to "exercise caution when selecting a residential treatment program."[20] The review findings indicate that PE ownership is associated with cutting costs on essential care aspects at treatment centers, including lower staffing levels, less staff training, and selective admission practices based on insurance coverage and clinical complexity.

Overall, the evidence presented in this literature review emphasizes the need for transparency, accountability, and a patient-centered approach in healthcare ownership models to ensure high-quality, evidence-based care for all individuals. Recognizing the potential adverse effects of PE firm ownership on vulnerable populations becomes critical in guiding policymakers toward developing comprehensive policies. These policies should prioritize patient care over profit motives and strive to eliminate disparities, providing equal opportunities for all individuals in their journey toward eating disorder recovery.

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Appendix 1: Search Strategy

PubMed

((private equity) AND (united states)) AND (healthcare)
469 results

EconLit

(United States) AND (Private Equity) OR (for profit) AND healthcare OR (eating disorder) AND (residential treatment) OR hospice OR (nursing home) OR (inpatient hospitalization)
1,315 results

Ovid Medline

(United States) and (private equity or for profit or privately owned or healthcare) and (eating disorder or residential treatment or hospice or group home or developmental disabilities or nursing home or assisted living or inpatient hospitalization or inpatient treatment or substance abuse or addiction or alcoholism) {Including Related Terms}
3,862 results

Appendix 2: Excluded Studies in Full-Text Review

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Appendix 3: Heat Map of Peer-Reviewed Literature Synthesis

	Costs to Patients or Payers	Quality	Admission & Access to Treatment
Rodgers & Barnett (2000)[37]		Harmful	Harmful
Wheeler & Nahra (2000)[38]			Harmful
Stevenson & Grabowski (2008)[39]		Mixed	
Nahra (2009)[40]	Harmful		Harmful
Harrington et al (2012)[41]		Harmful	
Bachhuber et al (2014)[42]		Harmful	Harmful
Huang & Bowblis (2018)[43]	Mixed	Beneficial	
Braun et al (2020)[44]		Mixed	
Beetham et al (2021)[23]	Harmful		Harmful
Gupta et al (2021)[45]	Harmful	Harmful	