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**Deadly Duopoly: Consolidation in the Dialysis Industry  
and the Role of Antitrust Law**

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Dialysis is a life-giving treatment for individuals who suffer from loss of kidney function. The kidneys are responsible for filtering waste products and excess fluids from the blood, maintaining electrolyte balance, and regulating blood pressure. However, kidneys gradually deteriorate with prolonged exposure to conditions such as diabetes and high blood pressure. When a patient’s filtration capacity reaches lower than 15 percent of normal levels, they are diagnosed with end-stage renal disease (ESRD), which is characterized by a rapid and permanent decline in kidney function. Patients with ESRD have two options: the first is to receive a healthy kidney via transplant.<sup>1</sup> But options to receive a transplant are very rare, and so the vast majority of patients with ESRD – 97 percent – take the second option, which is to undergo dialysis treatment.<sup>2</sup>

Hemodialysis is a process by which the patient’s blood is removed from the body and circulated through a filter in a dialysis machine to remove waste products, preventing these waste products from accumulating to harmful levels.<sup>3</sup> The dialysis machine thus acts as an external kidney, without which the patient would face certain death. Patients typically complete three sessions of dialysis treatment each week; a single session takes 3 to 4 hours and must occur while sitting. The frequency and lengthy duration of dialysis treatments motivate patients to seek out facilities close to their homes, and they rarely travel more than 25 miles to receive care.<sup>4</sup> The logistical burdens faced by patients with ESRD imply that markets are defined very narrowly, with competition occurring in small geographic areas. Within discrete geographies, dialysis clinics compete for patients on the basis of distance and travel time.

As rates of ESRD climb, promoting competition in the dialysis industry is paramount not only from the standpoint of public health, but as a matter of equity and fiscal responsibility. Between 2001 and 2019, the number of patients newly diagnosed with ESRD grew from 97,856 to 134,837 – a 37.8 percent increase – due in part to an aging population and rising rates of obesity.<sup>5</sup> In the United States, ESRD disproportionately affects minority groups: relative

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<sup>1</sup> *Too Many Donor Kidneys Are Discarded in U.S. Before Transplantation*, PENN MEDICINE NEWS (Dec. 16, 2020), <https://www.pennmedicine.org/news/news-releases/2020/december/too-many-donor-kidneys-are-discarded-in-us-before-transplantation> (The availability of this option is constrained by the number of kidneys available and somatic eligibility for the kidneys that are available. “The shortage of kidneys for transplantation continues to be a public health crisis in the U.S. More than 90,000 patients are waiting for kidney transplants, yet only about 20,000 transplants are performed each year. Annually, nearly 5,000 people on the transplant waiting list die without getting a transplant.”).

<sup>2</sup> *Quick Kidney Disease Facts and Stats*, AMERICAN KIDNEY FUND (last updated Apr. 19, 2024), <https://www.kidneyfund.org/all-about-kidneys/quick-kidney-disease-facts-and-stats>.

<sup>3</sup> *The Kidney Project: Statistics*, UNIVERSITY OF CALIFORNIA SAN FRANCISCO SCHOOL OF PHARMACY, (last visited May 16, 2024) (hemodialysis serves 90 percent of dialysis patients in the United States; peritoneal dialysis serves the balance. The remainder of the paper refers to hemodialysis simply as “dialysis”) <https://pharm.ucsf.edu/kidney/need/statistics#:~:text=Hemodialysis%20is%20the%20far%20more,clinic%20three%20times%20per%20week>.

<sup>4</sup> Thomas Wollmann, *How to Get Away with Merger: Stealth Consolidation and Its Effects on US Healthcare*, NATIONAL BUREAU OF ECONOMIC REVIEW (working paper, last revised Mar. 2024), <https://www.nber.org/papers/w27274>.

<sup>5</sup> *2023 Annual Data Report: End Stage Renal Disease, Ch. 1: Incidence, Prevalence, Patient Characteristics, and Treatment Modalities*, UNITED STATES RENAL DATA SYSTEM (2024), <https://usrds-adr.niddk.nih.gov/2023/end-stage-renal-disease/1-incidence-prevalence-patient-characteristics-and-treatment-modalities>.

to white Americans, Latino and Native Americans are twice as likely to experience kidney failure, and Black Americans are 4 times as likely. These patients face steep costs for healthcare, with the average cost for in-center dialysis ranging from \$72,000 to \$88,000 per year.<sup>6</sup> In most cases, it is Medicare that picks up the tab, covering up to 80 percent of associated costs. The Social Security Amendments of 1972 enable patients with ESRD under the age of 65 to enroll in Medicare, and while these beneficiaries comprised less than 1 percent of the Medicare population in 2016, they accounted for 7 percent of total fee-for-service spending, or \$35.5 billion.<sup>7</sup> Beneficiaries with Chronic Kidney Disease (CKD) – the antecedent condition of ESRD – accounted for 23 percent of total fee-for-service spending, or \$79 billion.

Because Medicare is the primary payer for patients with ESRD, dialysis clinics compete chiefly on quality; the Medicare rate that clinics receive from Medicare patients is standardized and set by the government. The vast majority of free-standing dialysis clinics – 91 percent – are private, for-profit facilities.<sup>8</sup> Among dialysis clinics, the quality of care varies considerably; a 2020 meta-analysis found that patients at for-profit clinics have 7 percent greater odds of death annually than patients at not-for-profit institutions.<sup>9</sup> Mortality rates are not the only measure of quality. Others include hospitalization rates, hemoglobin levels, and share of patients referred for a kidney transplant, as well as the ratio of patients to nurses and certified technicians.<sup>10</sup>

This paper will investigate the impacts of consolidation in the dialysis market on patients' access to reliable services – defined on the basis distance and travel time – and quality of care. It will further examine the role of stealth consolidation in the industry and the harms posed by it. It then addresses a variety of competition-based solutions, ranging from extending prior approval to dialysis firms to breaking up previously consummated, anti-competitive mergers. Finally, the paper concludes with solutions grounded in Medicare policy. Overall, we attempt to provide a comprehensive look at improving the quality of care amongst dialysis clinics.

## I. Dialysis Market Background

### A. Historical Market Structure

For a patient with ESRD, receiving dialysis treatment is a continual and time-intensive process. Because patients must visit a clinic several times a week for several hours each visit, they often choose the clinic that is closest to their home, and rarely travel more than 25 miles to

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<sup>6</sup>Sophie Wei, *Dialysis Cost with and Without Insurance in 2024*, MIRA (Jan. 1, 2024), <https://www.talktomira.com/post/how-much-does-dialysis-cost-in-2022>.

<sup>7</sup>*Increasing the Number of Kidney Transplants to Treat End Stage Renal Disease*, THE COUNCIL OF ECONOMIC ADVISERS (Jan. 2021), <https://trumpwhitehouse.archives.gov/wp-content/uploads/2021/01/CEA-Kidney-Transplant-Report1.8.211.pdf>.

<sup>8</sup>Samuel Dickman et al., *Mortality at For-Profit Versus Not-For-Profit Hemodialysis Centers: A Systematic Review and Meta-Analysis*, 51 INT'L J. OF SOC. DETERMINANTS OF HEALTH AND HEALTH SERVS. 371, 372 (2021).

<sup>9</sup>*Ibid.*

<sup>10</sup>Paul Eliason et al., *How Acquisitions Affect Firm Behavior and Performance: Evidence from the Dialysis Industry*, 135 Q. J. ECON. 221, 240-41 (2020).

receive care.<sup>11</sup> Given the local nature of demand for dialysis services, there are now clinics in nearly every geographic market in the United States. Dialysis clinics are typically single-purpose, free-standing buildings, although a small minority of treatment centers are located within hospitals. The dispersed and functionally independent nature of dialysis clinics in the US is notable, as it has made these facilities vulnerable to acquisition strategies pursued by the industry's two biggest players – Fresenius and DaVita.

Fresenius' and DaVita's market shares have grown considerably over the past two decades. In the early 2000s, Fresenius and DaVita possessed 24.3 percent and 13.9 percent of the dialysis market, respectively. *Today, the two firms own over 60 percent of all dialysis facilities and rake in 90 percent of the profits*, benefiting from economies of scale as well as disproportionate bargaining power with insurance companies.<sup>12</sup> Part of their growth in market share is attributable to the expansion of the dialysis industry as a whole: the total number of unique dialysis facilities increased by 42 percent between 2006 and 2016, from 4750 to 6738.<sup>13</sup> However, the number of facilities associated with large dialysis organizations – firms with 20 or more facilities – increased by 69 percent, indicating that although there was increased facility entry into markets to meet rising demand for dialysis care, multi-facility dialysis chains comprised most new entrants.

Arguably, larger dialysis facilities were better positioned to meet the rising demand for dialysis services. However, Fresenius and DaVita further exploited this demand by engaging in “stealth consolidation,” a strategy whereby new facilities are acquired piecemeal in transactions whose value falls below the \$120 million threshold specified by the FTC, and hence do not require a pre-merger notification.<sup>14</sup> This strategy was easily adapted to the dialysis industry, where individual facilities are small and operate in geographically distinct markets; the lack of pre-merger notifications shielded Fresenius and DaVita from scrutiny as they aggrandized their own market shares. Achieving economies of scale was especially important after 2011, when Medicare updated its payment model for dialysis facilities. Previously, facilities received one payment for standard dialysis services and a second payment for patient-specific drugs and tests. The 2011 Medicare ESRD Prospective Payment System (PPS) bundled the two-component payment into a single payment per patient, regardless of the number of drugs or tests administered during treatment. This created an emphasis on reducing costs for outpatient dialysis that likely contributed to consolidation, as firms could no longer demand reimbursements for specific dialysis-associated costs.<sup>15</sup> The Fresenius-DaVita duopoly has had measurable, negative impacts on patient access and quality of care, which will be explored in depth in Section III.

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<sup>11</sup> See *supra* note 4 Wollmann at 48.

<sup>12</sup> See *supra* note 10 Eliason at 230.

<sup>13</sup> Caroline E. Sloan et al., *Trends in Dialysis Industry Consolidation After Medicare Payment Reform, 2006-2016*, JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION HEALTH FORUM (2021) at 3.

<sup>14</sup> See *supra* note 4 Wollmann at 2.

<sup>15</sup> Kevin F. Erickson, *Consolidation in the Dialysis Industry, Patient Choice, and Local Market Competition*, 12 CLIN. J. AM. SOC. NEPHROL. 536, 542 (2016).

## B. FTC Market Definition

In litigating antitrust cases against dialysis providers, the FTC has defined both product and geographic markets. The complaints brought in *American Renal Associates, Inc. v. Fresenius Medical Care Holdings, Inc.* and *In the Matter of DaVita Inc., and Total Renal Care, Inc.* similarly define the relevant product market as “the provision of outpatient dialysis services.”<sup>16</sup> While there are other lines of commerce that are impacted by consolidation in the dialysis industry, such as the vertical integration of clinics and bloodline tubing producers, the acquisition of treatment facilities has been the focus of the enforcing agencies and will therefore form the crux of this paper.<sup>17</sup>

Regarding geographic markets, the FTC assumes a local geographic area approach based on “the distance ESRD [patients] are willing or able to travel to receive dialysis treatments.”<sup>18</sup> The FTC frequently defines geographic markets using county borders; these documents are drafted by the agency but typically reflect negotiation with merging parties, implying that county-based market definitions are likely to reflect some consensus between enforcement officials and dialysis providers about local competition.<sup>19</sup> Indeed, USRDS data reveals that over 90 percent of patients visit facilities in the market in which they reside.<sup>20</sup>

However, the hyper-local nature of markets for dialysis services, enshrined in the county-based approach, has made it difficult for the agencies to analyze competition under the framework set forth by the 2023 Horizontal Merger Guidelines. That framework holds a structural presumption against any merging companies that 1) are merging in a market with an HHI of 1,800+, and 2) are merging such that the HHI will increase by 100+ points. The problem is that many dialysis mergers do not trigger the FTC pre-merger notification requirements – today, defined as a transaction valued at more than \$120 million – and for other reasons additional acquisitions can go unnoticed.<sup>21</sup>

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<sup>16</sup> *American Renal Associates, Inc. v. Fresenius Medical Care Holdings, Inc.*, No. 0510234 (2007) *Federal Trade Commission* (F.T.C.); *In the Matter of DaVita Inc., and Total Renal Care, Inc.* FTC Matter 2110013 Docket Number C-4677 (2021).

<sup>17</sup> *FTC Requires Fresenius Medical Care AG & KGaA and NxStage Medical, Inc. to Divest Bloodline Tubing Assets to B. Braun Medical, Inc. as a Condition of Merger*, FEDERAL TRADE COMMISSION (Feb. 19, 2019).

<sup>18</sup> See *supra* note 16 *American Renal v. Fresenius* at 4 (“The relevant geographic market for the provision of outpatient dialysis services is defined by the distance ESRD patients are willing or able to travel to receive dialysis treatments, and is thus local in nature. Because ESRD patients often suffer from multiple health problems and may require assistance traveling to and from the dialysis clinic, and because of the high frequency of treatments, these patients are unwilling or unable to travel long distances to receive dialysis treatment.”).

<sup>19</sup> See *supra* note 4 *Wollmann* at 50.

<sup>20</sup> *Ibid.*

<sup>21</sup> *LBOs and the Size of Transaction Test*, FEDERAL TRADE COMMISSION (Oct. 6, 2016) (leveraged buyouts, which are common in the private equity industry, are one type of transaction that can exploit this loophole in the FTC notice requirements).

### C. *The Role of Antitrust Review*

Large chains like DaVita and Fresenius have both the means and incentive to acquire smaller clinics through stealth acquisition. The means are provided through artful manipulation of the HSR review process; deals can be easily structured to sit below the \$120 million threshold to avoid triggering HSR review. Large chains have taken advantage of the market's erstwhile fragmentation (most clinics that were not owned by DaVita and Fresenius were owned either independently or as part of small chains) to acquire a few clinics at a time.<sup>22</sup> These chains are motivated by the incentive to increase rents through monopolistic practices and firm strategy. Operating in concentrated markets allows large chains to degrade quality without losing customers, who have little-to-no alternatives for dialysis services, and there is evidence that even acquisitions that were structured to safeguard competition resulted in degraded quality (and increased profits).

A single acquisition could accommodate a sizeable number of individual clinics without triggering HSR review. Using an average clinic value of \$5 million in 2024,<sup>23</sup> a prospective acquirer could theoretically purchase a small chain of up to 24 clinics without triggering HSR review.<sup>24</sup> Acquisitions of larger chains whose value would trigger HSR review can also be executed through stealth acquisition, though these transactions require more steps. First, the acquiring firm must convince the to-be-acquired firm to proactively divest "problem clinics" that would trigger that FTC's scrutiny – that is, clinics competing in the same geography as clinics already owned by the acquiring firm. Second, the remaining clinics can be acquired through a reportable acquisition, since the HSR review will not identify any problematic transactions. Finally, the divested problem clinics – if they are small in number – can be re-acquired through stealth acquisition, completing the monopolistic deal.

Until now, antitrust review has failed to prevent monopolization in the dialysis industry primarily because it is only effective when deals are reportable. Adhering to the practices outlined in the previous paragraph makes it easy for firms to circumvent antitrust review; indeed, over 2,000 of the 4,333 individual clinics acquired between 1996 and 2017 were purchased in unreported transactions. Although the FTC has statutory authority to review *all* transactions – reportable or otherwise – it generally does not review stealth acquisitions because they fly beneath the agency's radar. Firms executing stealth acquisitions intentionally keep their dealmaking quiet to avoid FTC scrutiny. Senator Philip Hart, a sponsor of the HSR Act, summarized the difficulty of reviewing mergers that did not trigger the structural presumption: "The only method the [DOJ] and FTC had to be aware of pending mergers and acquisitions was to read the general and trade press. In other words, if the *Wall Street Journal* missed one, so well

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<sup>22</sup> See *supra* note 13.

<sup>23</sup> See *supra* note 4 *Wollmann* at 15 ("To fix ideas, suppose ... facilities sell for \$4 million each." An additional \$1 million is added to this figure to (over)approximate for inflation since 2020, when the paper was first published).

<sup>24</sup> Even taking the original \$50 million HSR threshold in use at the beginning of the study's time period (1997) (15 U.S. CODE § 18a(2)(B)(i)), a hypothetical acquirer could purchase a chain of 10 clinics (using the estimated cost per clinic in 2024) without triggering review.

may [have] the FTC and the [DOJ].”<sup>25</sup> Though Hart was speaking to the state of mergers and acquisitions prior to the promulgation of the HSR Act, the same sentiment holds true for stealth acquisitions today.

The 2,000 plus clinics acquired by stealth acquisition are among the roughly 7,600 total clinics in the country as of May 2024.<sup>26</sup> Between the organic growth of the dialysis industry and the death-by-a-thousand-papercuts strategy that large chains have employed, the national market can currently be characterized as a duopoly of Fresenius and DaVita. One could imagine a counterfactual wherein consolidation occurring at the national level had not diminished competition in regional markets, which are of primary concern to the average patient. Regrettably, Wollman (2020) provides compelling evidence that stealth acquisitions have had a deleterious effect on local market competition as well.

Wollmann (2020) compares the expected  $\Delta$ HHI in local markets that would result from an acquisition with the actual  $\Delta$ HHI that occurs after an acquisition takes place. In an ideal world where all transactions are reportable, whenever the expected  $\Delta$ HHI is high, the FTC would step in to either (1) block the acquisition, or (2) condition the acquisition on some remedy, such as divestiture of problem clinics. The FTC’s intervention implies that, although the expected  $\Delta$ HHI would be high, the actual  $\Delta$ HHI would be low, as the acquisition would be sufficiently remedied by the FTC. However, the unreported status of many transactions limits the effectiveness of this approach. Wollmann finds that  $\Delta$ HHIs identified in reportable transactions do face remedial enforcement from the FTC, but that  $\Delta$ HHIs identified in unreported transactions – which can be as much as 5,000 – *never receive any remedial enforcement*. In other words, large dialysis firms had been given carte blanche to monopolize markets and inflate HHIs beyond permissibly high levels, so long as monopolization has been achieved through stealth acquisition. The extreme disparity between the high enforcement rates for reportable transactions and nonexistent enforcement rates for stealth, or “exempt,” transactions is depicted below:

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<sup>25</sup> *The Antitrust Improvements Act of 1975: Hearings before the Subcommittee on Antitrust and Monopoly of the Committee on the Judiciary*, UNITED STATES SENATE, NINETY-FOURTH CONGRESS, FIRST SESSION, on S. 1284.

<sup>26</sup> *Dialysis Facility – Listing by Facility*, CENTERS FOR MEDICARE & MEDICAID SERVICES, (last modified May 6, 2024) (showing that there were 7,581 dialysis clinics in the U.S. at the time of publishing).



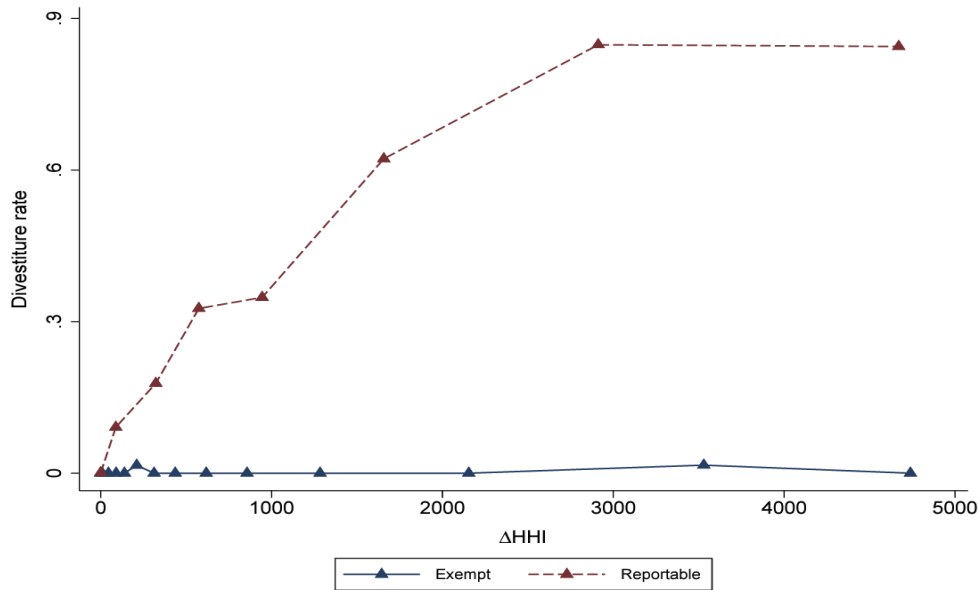


Figure 1. Stealth Mergers Escape Scrutiny<sup>27</sup>

Once local markets become monopolized, there are few opportunities to reintroduce competition organically due to market saturation and high barriers to entry. Market saturation occurs because there is often ample supply provided by existing clinics. An entrant providing higher quality services would have a difficult time attracting new patients who are already serviced elsewhere, not only because higher quality is not easily observable, but also because there are significant logistical burdens for patients to switch dialysis care providers. Moreover, new clinics cannot advertise records of higher quality – for example, lower mortality and hospitalization rates – because they lack the track records to prove this. Contracting with a nephrologist, who is needed to serve as the clinic’s medical director, presents another barrier to entry. Existing firms make it difficult to find a local nephrologist by entangling them in exclusive contracts, and nephrologists who are new to a market must take time to develop a roster of clients that they can bring over to the entrant clinic.<sup>28</sup> Consequently, monopolized local markets in the dialysis industry are rarely contestable, and firms that enjoy monopoly status benefit disproportionately from the lack of local competition.

<sup>27</sup> See *supra* note 4 Wollmann at 16 (“Figure 1.”).

<sup>28</sup>

*In the Matter of DaVita, Inc. and Total Renal Care, Inc.; Analysis of Agreement Containing Consent Orders To Aid Public Comment*, THE FEDERAL REGISTER (Nov. 10, 20214) (“The Department of Health and Human Services requires each dialysis clinic have a nephrologist as a medical director. Locating a nephrologist is difficult because clinics typically enter into exclusive contractual arrangements with a nephrologist who is paid a medical director fee. Finding patients may also be difficult if the nephrologist does not have local ties, as most nephrologists typically refer their patients to the clinic where they serve as medical director. Moreover, the area itself must have a low penetration of dialysis clinics and a high ratio of commercial to Medicare patients to attract entry.”).

## II. The Harms of Dialysis Clinic Consolidation

Dialysis clinic consolidation harms consumers primarily by degrading quality of service, as evidenced by increased mortality and hospitalization rates. Degradations in quality come about through two mechanisms, both of which result from acquisitions. First, Eliason (2019) demonstrates that acquired clinics experience a decline in quality regardless of whether the acquisition itself resulted in reduced competition.<sup>29</sup> This occurs when the large chain imposes its firmwide “strategies” onto the smaller clinic – these strategies degrade quality. Second, as established by Wollmann (2020), quality degrades even further when clinic acquisitions reduce competition.<sup>30</sup> In both cases, the primary harm imposed by clinic acquisitions comes in the form of quality reductions, followed by a secondary harm of increased prices to private insurance companies.

Clinics that operate in low-competition settings can reduce quality without fear of losing patients, who have diminished opportunities to find a better dialysis provider. High concentration allows firms to leverage their market power to raise prices too, though they may only do so on the minority of patients (roughly 20%)<sup>31</sup> that are on private insurance at any given time.<sup>32</sup> These patients pay roughly three times the rate that patients on Medicare pay.<sup>33</sup> However, privately insured patients eventually become eligible to transfer to Medicare after the first three months of receiving treatment (though patients who begin Medicare on an Employer Group Health Plan retain their EGHP as their primary insurer for a further 30 months before Medicare takes over as the primary insurance).<sup>34</sup> ESRD is the only condition eligible for near-universal Medicare coverage irrespective of age, making this transferal unique to dialysis services. The reimbursement disparities between Medicare and private insurance incentivize firms to attract privately insured patients more so than patients on Medicare, while the transferal system as currently structured incentivizes firms to retain privately insured patients only for as long as they remain privately insured.

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<sup>29</sup> See *supra* note 10 *Eliason*.

<sup>30</sup> See *supra* note 4 *Wollmann*.

<sup>31</sup> See *supra* note 10 *Eliason* at 228 (“In 2014, over 80% of the 460,000 ESRD patients receiving dialysis treatments in the U.S. were enrolled in Medicare.”).

<sup>32</sup> *Ibid.* at 222 (“Prior to the 2011 change in Medicare reimbursement policy, firms could also effectively raise the price of care.”) and at 242 (“...acquired facilities increase their per-session Medicare reimbursements by 6.9%”). Acquired clinics facilitated these higher reimbursements primarily by raising reimbursements for purchased drugs, such as Epogen. At 222 (Patients’ “[Epogen] doses increase 129% at independent facilities acquired by large chains.”) The practice of maximizing drug reimbursement resulted in increased prices to CMS without improving, and sometimes worsening, service.

<sup>33</sup> Riley J. League et al., *Assessment of Spending for Patients Initiating Dialysis Care*, 5 JOURNAL OF AMERICAN MEDICINE NETWORK OPEN at 1 (“...patients insured by Medicare had annual mean spending of \$80 509 compared with \$238 126 for privately insured patients in their first year of dialysis.”)

<sup>34</sup> *Insurance Options for People on Dialysis or With a Kidney Transplant*, NATIONAL KIDNEY FOUNDATION (last accessed May 14, 2024) (patients do not automatically shift over to Medicare – they “retain [private insurance coverage] for the first 30 months of treatment before Medicare becomes the primary payer”).

A. *Reduced Quality when Acquired by a Chain*

Eliason (2019) finds that acquirers extend their operational strategies to acquired clinics irrespective of the concentration that the acquired clinic operates in.<sup>35</sup> He also finds that post-acquisition strategies are more profit maximizing than pre-acquisition strategies and that it is these profit maximizing strategies that likely are responsible for quality declines. There are several reasons why independent clinics' operational strategies are less profit maximizing than those of larger chains. Some independent clinics are nonprofits, and so their operating strategies may optimize for patient outcomes rather than profit.<sup>36</sup> Independent or small chains of for-profit clinics might also choose to prioritize patient outcomes at the cost of profit out of a moral or a regional duty to the communities they operate in. Even independent clinics that *do* wish to profit maximize may simply lack the means to do so. Larger chains have many clinics at which they can deploy profit-maximizing strategies, which grants them both large reserves of capital and many opportunities to recoup investments in profit-maximizing strategies. Conversely, independent clinics lack the scale needed to invest in developing these strategies.

Clinics acquired by chains tradeoff quality for profit, according to Eliason. Acquired facilities replace high-skill nurses with lower-skill technicians and further increase the patient-load of each employee by 11.7 percent, reducing costs by overextending resources.<sup>37</sup> In addition, acquired-clinic physicians have (needlessly and sometimes harmfully) increased the volume of drugs they administered to patients, for which Medicare reimbursed them at a fixed per-unit rate. In particular, prior to 2011 – when Medicare ceased to reimburse providers for injectable drugs on a fee-for-service basis – doses of the drug EPOGEN increased as much as 129 percent after an independent clinic was acquired by a large chain.<sup>38</sup> The financial incentives to over-prescribe were clear: over-prescribing raised the per-patient reimbursement rate beyond the standard Medicare rate.<sup>39</sup>

The ability to degrade quality even in settings with high competition is not immediately intuitive and suggests that dialysis is to some extent a credence good, or a good that is difficult to evaluate even after consumption has occurred. Patients are unable to discern if all a clinic's policies are maximizing their health and wellbeing. For example, it may be difficult to tell the difference between a machine that has been properly sterilized and another machine that appears

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<sup>35</sup> See *supra* note 10 Eliason at 251.

<sup>36</sup> Sandra Amaral et al., *Association Between Dialysis Facility Ownership and Access to the Waiting List and Transplant in Pediatric Patients With End-stage Kidney Disease in the US*, 328 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION 427, 428 (2022) (finding that round 11% of clinics were set up as nonprofits in 2020, and research has shown that patients of nonprofit clinics are more likely to be placed on waiting lists for transplants than patients of for profit clinics. This partially indicates that nonprofit clinics are more inclined to maximize patient welfare than for-profit clinics).

<sup>37</sup> See *supra* note 10 Eliason at 221-22.

<sup>38</sup> Carrie Arnold & Larry C. Price, *Kidney Dialysis Is a Booming Business—Is It Also a Rigged One?*, SCIENTIFIC AMERICAN, (Dec. 14, 2020) <https://www.scientificamerican.com/article/kidney-dialysis-is-a-booming-business-is-it-also-a-rigged-one/>.

<sup>39</sup> See *supra* note 10 Eliason at 228 (the extent of over prescription is visible in DaVita's 2005 accounting profits—for which reimbursements of injectable drugs like Epogen made up 40 percent).

clean but is not. CMS provides databases for the public to view quality metrics for all dialysis clinics, but it is unclear to what extent patients use these databases to inform which clinic they decide to go to.<sup>40</sup> High travel and switching costs may further cause a patient to frequent low-quality clinics even when they are aware of higher quality options.<sup>41</sup> Large chains take advantage of these characteristics to degrade quality without losing patients to competitors. Chains may even tolerate small amounts of churn to competitors in high-competition settings for the sake of firm standardization. Moreover, large chains can afford to hold quality-reducing firmwide policies with the knowledge that losses due to churn in the few clinics in competitive markets will be small in comparison to gains from firmwide cost-cutting and standardization.

Reduced quality in dialysis clinics has deleterious effects on all patients' health and wellbeing. Eliason (2019) assessed patient outcomes in clinics acquired by a larger chain and found that quality declines precipitously for patients post-acquisition. Eliason specifically found quality decline through (1) a 4.2 percent higher likelihood of hospitalization in a given month,<sup>42</sup> (2) a 1.3-2.9 percent drop in survival rate,<sup>43</sup> and (3) an 8.5 percent lower likelihood of being added to a kidney transplant waiting list.<sup>44</sup> These three reductions in quality are facilitated by adoption of the parent firm's operational practices<sup>45</sup> that reduce patient services, including replacing high-skill nurses with lower-skill technicians, increasing the number of patients assigned to each employee, and increasing the number of patients served by each dialysis station.<sup>46</sup> Decreasing the quality of staff, and overloading staff and equipment with patients, leads to avoidable mistakes and lower cleanliness that increase the occurrence of hospitalization and death. For example, patients of post-acquisition clinics experience a 10% higher likelihood of being hospitalized for septicemia, a blood infection that is "avoidable through the proper cleaning and disinfecting of dialysis machines between patients."<sup>47</sup> It is likely that staff at acquired clinics become too overburdened and under-skilled to carry out the disinfection and cleaning needed to avoid septicemia.

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<sup>40</sup> See *supra* note 26.

<sup>41</sup> See *supra* note 4 Wollmann at 23-24 ("On average, patients are indifferent between 2.96 miles of additional travel, a one percentage point increase in quality, and 3.9 more machines." Wollmann notes additionally that 2.96 additional miles may seem small at first blush, but that the frequency of the travel amounts to more than 1,000 extra miles driven per year).

<sup>42</sup> See *supra* note 10 Eliason at 241 (the likelihood of being hospitalized for septicemia, a blood infection common among dialysis patients, rises 10.0% following acquisition).

<sup>43</sup> *Ibid.* ("we find that patients' 365-day survival rate decreases by 1.27 percentage points, or 1.7%. After 730 days patient survival rates fall by 2.9%.")

<sup>44</sup> *Ibid.*

<sup>45</sup> These operational practices are imposed on the acquired firm systematically in the shape of firm-wide operation manuals and protocols. Though these standards are most harmful when adopted by clinics in low-competition settings (because patients dissatisfied with the new standards have few alternatives to turn to), they are generally adopted by all clinics that the acquiring firm operates.

<sup>46</sup> See *supra* note 10 Eliason at 239 ("Upon acquisition, the target firm decreases its nurse-technician ratio by roughly 15.1%. Newly acquired facilities also stretch their resources by increasing their patient-to-employee ratio by 11.7% and their patient-to-station ratio by 4.5%.")

<sup>47</sup> *Ibid.*

Survival rate	- 1.3-2.9%
Hospitalization rate	+ 4.2%
Transplant rate	- 8.5%
Septicemia rate	+ 10.0%

Table 1: Quality Declines Post-Acquisition

*B. Reduced Quality when Competition is Reduced*

While Eliason (2019) finds some association between acquisition by a large chain and declining quality irrespective of market competition, Wollmann (2020) discerns that consolidation still plays a role in reducing quality. He identifies this distinction by comparing quality metrics at clinics that were acquired by reportable acquisition and by stealth acquisition. He finds that quality at clinics that were purchased by reportable acquisition was substantively higher than those purchased by stealth acquisition. This is evidence that while large chain acquisition diminishes quality as per Eliason (2019), acquisitions *that consolidate the market* diminish quality even further.

Eliason (2019) and Wollmann (2020) can be reconciled by noting a few methodological differences between them. Eliason focuses on whether quality declined because of acquisition *even if* competition did not decrease; therefore, their conclusions do not necessarily imply that decline in quality is *completely unrelated* to competition. Wollmann addresses this question more directly. First, Wollmann defines markets at the county level whereas Eliason leverages health service areas, which “are large catchments that typically extend far beyond the points from which patients travel.”<sup>48</sup> Second, Wollmann registers how quality changes with respect to the *magnitude* of HHI change (in contrast, Eliason utilizes a binary indicator, which registers all positive HHI changes equally).<sup>49</sup> Wollman’s methodology both (1) results in more liberal pre- and post-acquisition HHI estimates (from using smaller geographic markets), and (2) is designed to observe only acquisitions that resulted in relatively high HHI increases, allowing them to discount when minimal increases in HHI result in minimal changes to quality.

Wollmann thus supplements Eliason’s research by demonstrating that even though acquired clinics reduce quality irrespective of competitive landscape, they reduce it *even more in consolidated markets*. They find that stealth acquisitions that result in a substantial increase in HHI<sup>50</sup> result in an average 3.5 percent increase in hospitalization rates compared to reportable acquisitions, which do not unduly increase HHI.<sup>51</sup> This suggests that large chains consider their local market power when making decisions about quality, reducing quality generally when acquiring a clinic but degrading it even further if that clinic operates in a low-competition landscape. Wollmann further finds that patients are somewhat responsive to quality differences, though it is unclear which quality metrics they can discern and incorporate into their decision. Because of the high transportation costs associated with getting to and from dialysis clinics

<sup>48</sup> See *supra* note 4 Wollmann at 47.

<sup>49</sup> *Ibid.*

<sup>50</sup> *Id.* at 18 (“I define [large increase in HHI] equal to one if  $\Delta$ HHI exceeds its mean value and zero otherwise.”).

<sup>51</sup> *Id.* at 48.

multiple times a week, patients are still willing to frequent lower quality clinics that are easier to get to. Wollmann specifically finds that patients are “indifferent between 2.96 miles of additional travel, a one percentage point increase in quality, and 3.9 more machines,” where an increase in machines makes scheduling appointments easier.<sup>52</sup> That patients are at least somewhat responsive to quality declines indicates that competition would increase quality, and that clinics that operate in monopoly settings have a higher ability to degrade quality without losing customers than clinics that operate in high-competition settings.

Together, Eliason’s and Wollman’s research provides evidence that (1) acquisitions by larger firms generally reduce quality, and (2) acquisitions that consolidate markets reduce quality even further. This means that enforcement to protect patients and increase quality should take on different forms to address these dual vehicles for patient harm.

### III. Proposed Solutions

Acquisitions in the dialysis clinic industry have resulted in reductions in quality for patients that have increased mortality and hospitalization rates. The nature of the problem that acquisition poses requires multiple solutions to both (1) prevent future harmful acquisitions from occurring, and (2) alleviate harms from past acquisitions.

#### A. *Apply the Prior Approval Policy to DaVita and Fresenius*

The FTC may prevent future harmful acquisitions in a few different ways. One method involves using ongoing merger settlements to require DaVita and Fresenius to report every future transaction involving a dialysis clinic to the FTC.

This would not be unprecedented. After all, in July 2021, the FTC reinstated its prior approval policy, which requires companies that have previously violated antitrust law to obtain prior approval for any future transactions, regardless of whether they surpass the HSR threshold. Both DaVita and Fresenius have engaged in anti-competitive activity, so it would be relatively easy to apply this policy to them. Applying the prior approval policy to these two firms would expose previously undetectable stealth transactions while also deterring the firms from attempting anticompetitive transactions in the first place. The prior approval policy both (1) expands the *type* of transaction the FTC would review to cover even below-threshold acquisitions, and (2) limits the *number* of transactions that the FTC would review by signaling that it is not worth attempting an anticompetitive transaction. This deterrence effect safeguards the FTC’s limited resources. Even in the absence of a deterrence effect, Wollmann (2021) finds that the added cost of reviewing transactions below the HSR threshold is significantly outweighed by the overall benefits to society, saving around one billion dollars.<sup>53</sup>

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<sup>52</sup> See *supra* note 4 Wollmann at 22 (quality here refers to “one-year risk-adjusted survival rates”).

<sup>53</sup> See *supra* note 4 Wollmann at 31.

In evaluating the full set of transactions, the FTC should continue to follow the same policies it has maintained in the past. It should maintain its narrow geographic market definition and apply a structural presumption for acquisitions that exceed its regular HHI threshold. If the structural presumption applies to a transaction, then the FTC should condition it upon mandated divestitures to protect geographical market competition.

*B. Redressing Consummated but Anticompetitive Mergers*

Consummated dialysis clinic acquisitions have already reduced competition in several geographic markets. Market saturation and barriers to entry make it unlikely that these markets will become competitive again organically, requiring affirmative action to break up monopolized markets.<sup>54</sup>

The FTC may carry out this breakup by bringing a case under §2 of the Sherman Act against all anti-competitive dialysis transactions of the last 20 years. To do so, they would first need to identify mergers where the HHI increased by more than 100 points (above the structural presumption). The HHIs should be measured within the context of geographic markets within a 20-mile radius (or smaller) to properly account for the high travel costs that patients face.<sup>55</sup> Upon identifying these mergers, the FTC could then further identify the mergers that led to the most consolidation (and highest HHI increases) and begin building cases against the firms that monopolize frequently, such as DaVita and Fresenius. They could then file these cases and request relief in the form of court-mandated breakups and divestitures.

An ex-post breakup would be feasible partly because most dialysis clinics are free-standing outpatient facilities – even those that operate in the same market and are owned by the same firm. In many other mergers, it is difficult to require an ex-post divestiture because the merged entity has “scrambled the eggs”; in other words, the assets have been combined and intermingled in such a way that the transaction is logically difficult to undo. However, merged or acquired dialysis clinics rarely experience this “scrambled egg” problem because large chains rarely demand that the acquired clinic change locations. Commingling of assets is done at the superficial level, meaning that stand-alone facilities are not significantly changed post-acquisition, and any other assets (such as machines, equipment, digital services) and staff can be easily transferred to a potential new owner of a divested clinic.

However, some dialysis clinics may, after completing a transaction that put them under the same owner, have closed operations in one clinic and moved equipment to another. Such physical changes require a thoughtful remedy that helps patients as much as possible while being realistic. This could involve finding an entering buyer who would be approved to purchase a meaningful share of the equipment. The clinic could also be required to divide itself in two and establish a second facility near the original location that closed. After 5 years the FTC would

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<sup>54</sup> See *infra* Part II.C.

<sup>55</sup> See *supra* note 41, noting that 2.96 additional miles may seem small at first blush, but that the frequency of the travel amounts to more than 1,000 extra miles driven per year.

choose one of the two facilities to be divested from the original owner. Either way, the remedy to anti-competitive conduct should be decided with the direct goal of increasing competition in as many markets as possible.

Both solutions would increase competition in previously uncompetitive markets. By forcing broad-ranging divestitures, it would require firms like DaVita and Fresenius to immediately end their practice of consolidating clinics within a single market. This could result in better patient outcomes, as dialysis clinics are forced to compete on quality.

A second advantage to litigation is the chance to describe the tactics of these large chains to the public. DaVita and Fresenius are guilty of over-prescribing dialysis medication, failing to clean dialysis machines, hiring fewer nurses, and discouraging transplants, all in the pursuit of expanding their bottom line. Even if the judge was hesitant to order a large divestiture, the social awareness raised might stimulate other solutions. Secondly, litigation would settle the question about whether the antitrust laws cover consumer welfare that is not price. Dialysis is a great way to give courts an example of quality harm occurring in an industry where price harm may not. Medicare policy makes it so that dialysis clinics compete on quality, rather than price. Bringing this dialysis debate into the courtroom would allow courts to establish a legal standard for this circumstance that is relatively unique to healthcare.

We are aware that there may be some limitations with this approach. Principally, it is a weighty request to launch a lawsuit in various jurisdictions and concerning a broad variety of potential firms. Beyond just Fresenius and DaVita, this lawsuit would implicate nearly every dialysis merger that has occurred in the last 20 years, presenting potential logistical difficulties in litigating. A second challenge would relate to post-divestiture activity. Requiring a divestiture in many cases is only half the battle—the other half arises when considering who would take over the divestiture. It may be challenging to find a buyer who will run the clinic in a way that effectively competes against other clinics. Further, some nephrologists – individuals who run dialysis clinics – may be under exclusive contracts, which could make it impossible for them to switch to a newly created firm.<sup>56</sup> Regardless of these limitations, the breaking up of consummated mergers provides a clear path to undo harm that has previously eluded regulators.

### *C. Pass Legislation to Review All Future Dialysis Clinic Mergers with an EZ-Merge System*

The prior approval policy as reimplemented by the FTC in 2021 is narrow in that it only applies to parties' "future transaction[s] affecting each relevant market for which a violation was alleged."<sup>57</sup> This might impede the FTC from identifying an anticompetitive transaction in geographic markets where an alleged violation has not yet occurred. A more holistic, prophylactic

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<sup>56</sup> A more targeted intervention might consist of litigating exclusive contracts that are used to prevent nephrologists from contracting with entrant firms.

<sup>57</sup> *Statement of the Commission on Use of Prior Approval Provisions in Merger Orders*, FEDERAL TRADE COMMISSION (Jul. 21, 2021) [https://www.ftc.gov/system/files/documents/public\\_statements/1597894/p859900priorapprovalstatement.pdf](https://www.ftc.gov/system/files/documents/public_statements/1597894/p859900priorapprovalstatement.pdf).



approach is found in the “EZ-merge” system proposed by economist Fiona Scott Morton. An EZ-merge system would designate certain industries of concern and use algorithms to flag only the problematic transactions within those industries for review. Legislation to implement an EZ-merge-type system would expand the FTC’s net to identify *all* stealth transactions, not just those involving a firm that has already broken antitrust law. EZ-merge is especially useful in preventing anticompetitive mergers that are small and so naturally evade the HSR threshold, such as mergers that involve firms operating in small, regional output markets.

A comprehensive implementation of EZ-merge would require creating a new merger review step that all transactions, even those under the HSR threshold, must undergo. This (short) step would ask the transacting firms to “choose their type (e.g., auto tire retailer, primary care physicians, or funeral home) from a drop-down menu and enter the zipcodes of their customers.”<sup>58</sup> Transactions that are below threshold but with problematic types (pre-designated by the FTC) would be flagged for review. Algorithms would conduct the first round of review by identifying if there is enough overlap between the transacting firms (e.g., in labor markets, product markets, geographic markets), to warrant further review. If there is, only then would FTC staff step in to conduct review. Automated filtering minimizes demands on FTC resources, as does the deterrent effect from the knowledge that problematic mergers will certainly get reviewed.

A partial implementation of EZ-merge for dialysis clinics specifically is also possible and could indeed serve as a useful prototype for expansion to other problem industries. Under this limited version, only firms that operate in the dialysis clinic industry would be required to submit their (below HSR threshold) transactions for review. The same algorithm would conduct the initial geographic market review and would only flag highly problematic mergers for further FTC review. A pilot project focusing on this industry would be easier to conduct and provide useful precedent for later statutory expansion to other problem industries, while leveraging all the benefits of automation and pre-identification.

#### *D. Pass Legislation to Place a Cap on the Size of Chains*

As noted in Part II A, even transactions by large chains that do not reduce local market competition erode quality as the larger chain imposes its operational strategies on the newly acquired clinic. The above strategies can solve for acquisitions that reduce competition but are ill-equipped to tackle harm created by competitively neutral acquisitions. To solve for these, this paper proposes legislation to forbid a natural or corporate person from obtaining Medicare reimbursement if they have ownership stakes in more than 200 clinics, or else to forbid a person from holding an ownership stake in more than 200 dialysis clinics.

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<sup>58</sup> *Testimony of Fiona M. Scott Morton, Ph.D.*, HOUSE JUDICIARY COMMITTEE SUBCOMMITTEE ON REGULATORY REFORM, COMMERCIAL AND ANTITRUST LAW (Mar. 7, 2019) (Page 14).  
<https://docs.house.gov/meetings/JU/JU05/20190307/109024/HHRG-116-JU05-Wstate-MortonF-20190307.pdf>.

Further, we propose legislation that limits payments under Medicare to clinics that are part of corporate entities of no more than 200 facilities. Moreover, such clinics may not purchase or outsource management services from entities that serve other dialysis clinics. That is, the managers must run their own clinic or purchase management services from entities that are not dialysis clinics. This is to avoid concealed consolidation in dialysis clinic ownership. DaVita or Fresenius should not be able to skirt this ownership limit by, for instance, creating a subsidiary organization that provides management services to more facilities.

Restricting the ownership stake of one person or entity in dialysis clinics -- either directly or indirectly through a ban on Medicare reimbursement -- reduces the risk of oligopoly in the industry. These laws would place an upper bound on firms' efforts to maximize profits via stealth consolidation. In doing so, they are potentially more effective than antitrust enforcement because they acknowledge how standard models of competition often fail in the context of the dialysis industry. Standard models of competition predict that quality will increase with the extent of competition in the market, assuming that quality is positively correlated with demand. However, patients with ESRD cannot afford to be very sensitive to changes in quality due to the high logistical burdens of receiving care: Eliason et al. found that 98.4 percent of patients visited the same facility month-to-month, even after that facility was acquired by another firm.<sup>59</sup> Their findings suggest that competition does not have the same effect of disciplining firm behavior in the market for dialysis services as it does in other industries -- and that a legislative solution is warranted.

Moreover, these legislative proposals would widen the scope of scrutiny beyond the industry's big players. The blanket rule would apply to firms that do not enjoy national market share on the scale of Fresenius or DaVita but may dominate hyper-local markets. By intervening at the local level, the laws would accomplish two important ends: first, they would encourage the development of small businesses that are less prone to the harmful, profit-maximizing strategies employed by the industry's biggest players. Second, they would expand the range of action against pernicious dialysis providers while alleviating the agencies' responsibility to identify and prosecute each individual case. When violations do occur, the agencies can work with state attorneys general to enforce the laws, diluting the burden of antitrust enforcement on the federal government.

#### *E. Medicare Policy Solutions*

As detailed in previous sections, the dialysis industry is characterized by a high degree of government intervention in the form of Medicare. This suggests that Medicare reform might be a fruitful avenue for addressing the harms of consolidation in the dialysis industry. One remedy suggested by the EPOGEN example is that Medicare reimbursement schemes be improved. In 2011, Medicare bundled payments for dialysis treatments and their associated drugs into a prospective payment system (PPS), effectively reducing the incentive to overuse EPOGEN and

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<sup>59</sup> See *supra* note 10 Eliason at 246.

causing doses to plummet.<sup>60</sup> Another policy solution that would reduce incentives to over-prescribe the drug could be to require all firms to pay the same amount for EPO, regardless of the supplier. DaVita, for instance, has a contract with Amgen that provides volume-based discounts and other thresholds that incentivize DaVita to purchase—and therefore prescribe—more EPOGEN.<sup>61</sup> Standardizing the process across all dialysis clinics and EPOGEN suppliers would ensure that the drug is not abused. Not only is the overprescription of EPOGEN dangerous due to its immense cost on the federal government, but it is also linked to higher rates of cardiovascular disease and death.<sup>62</sup> By reducing the overuse of EPOGEN by dialysis clinics, patient outcomes could potentially improve.

CMS should also investigate strengthening its Quality Incentive Program (QIP) as part of its policies surrounding patients with ESRD. The QIP was created in August 2010 with the goal of improving dialysis patient outcomes. It does this by reducing Medicare payments to dialysis clinics that perform poorly on a set of quality-of-care metrics.<sup>63</sup> However, Reaves and Weiner found that penalties issued by the QIP did not seem to be associated with improvement in the quality of care. They suggest several reasons for this lack of efficacy: dialysis clinics are ranked against each other (which means facilities with “care-intensive” populations may be penalized), some metrics lack adequate nuance in representing differences in care, and the focus on certain metrics over others could encourage the diversion of resources away from “pressing quality initiatives.”<sup>64</sup> Tailoring the QIP to further value individual patient care, as opposed to clinically meaningless metrics, could be a potential solution to improve the system.<sup>65</sup> Furthermore, better controlling for community-level characteristics could ensure the QIP does not unfairly penalize minority communities.

These two policies would address the physician side of ESRD care: incentivizing companies that provide dialysis services to improve patient outcomes. However, there is availability for policy intervention on the patient side. For example, Congress could require that all patients seeking dialysis treatment switch to Medicare, as opposed to remaining on private insurance for a period of time. Though this would be unprecedented with regards to coverage, this would be a significantly lighter lift than for other diseases. Any individual with ESRD only retains their private insurance coverage for the first thirty months of their dialysis treatment, after which Medicare becomes the primary payer.<sup>66</sup> However, we suggest that this thirty-month period is either significantly reduced or eliminated. Doing this would have dual purposes. First, it would ensure that all dialysis treatments fall squarely under CMS purview, where it would be

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<sup>60</sup> Martin Gaynor et al., *Optimal Contracting with Altruistic Agents: Medicare Payments for Dialysis Drugs*, 113 AM. EC. REV., 1530 (2023).

<sup>61</sup> See *supra* note 10 Eliason at 246.

<sup>62</sup> *Ibid.*

<sup>63</sup> *Laws & Regulations*, CENTERS FOR MEDICARE & MEDICAID SERVICES (CMS) (accessed May 17, 2024) <https://www.cms.gov/medicare/quality/end-stage-renal-disease-esrd-quality-incentive-program/laws-regulations>.

<sup>64</sup> Allison C. Reaves & Daniel E. Weiner, *The ESRD Quality Incentive Program: Everything Can Be Improved*, 78:6 AMERICAN JOURNAL OF KIDNEY DISEASES (2021).

<sup>65</sup> Daniel Weiner & Suzanne Watnick, *The ESRD Quality Incentive Program—Can We Bridge the Chasm?*, 26:6 JOURNAL OF AMERICAN SOCIETY OF NEPHROLOGY (2017).

<sup>66</sup> See *supra* note 10 Eliason; see *supra* note 33 Riley.

better subject to regulations on quality. Furthermore, it would force firm strategy to align with improved care for patients. DaVita, for example, finds that all of its profits stem from patients on private insurance, since reimbursements can be 2.1 to 4.5 as generous as Medicare and spending by private insurers exceeds that of Medicare per dialysis patient.<sup>67</sup> By taking away this excessive profit source, firms offering dialysis services may be more incentivized to differentiate themselves on the quality of their services, rather than their ability to cater towards patients who can afford private insurance.

Critics may argue that shifting all dialysis patients onto Medicare will induce market exit as clinics expect to lose profit from privately insured patients. They may point to the fact that Medicare currently pays clinics a flat fee of \$271.02 per dialysis treatment,<sup>68</sup> while private insurers pay an average of more than \$1,467.<sup>69</sup> Dialysis firms might even claim that they *lose* money by treating patients on Medicare because the costs incurred to provide service are higher than the reimbursement that Medicare pays. This last claim is dubious given that CMS ensures that its reimbursements are enough to cover costs and provide modest profit to firms that are adequately using their resources. It becomes even less plausible in light of DaVita and Fresenius' profit margins, which were 25 and 22 percent respectively in 2021. Further, if Medicare was truly reimbursing below the correct market value, we expect clinics and the pharmaceutical industry to come forward with evidence and lobby for changed reimbursements. The political process that delivers rents to these private actors is beyond this paper's scope. But we are optimistic that in equilibrium the funding will be sufficient since neither the private sector nor the government wants all the clinics to close.

President Biden's Executive Order 14036, which suggests a whole-of-government approach to competition, justifies use of all of these tools. We note, however, that making Medicare reimbursements work to create efficiency and competition has a poor track record. The pharmaceutical and dialysis industries will also likely lobby Congress and other authorities to not enact such changes. Therefore, we feel that these Medicare policy solutions may not be enough to curb poor patient outcomes. Thus, the role that can be played by the antitrust authorities is particularly important in this industry.

#### IV. Conclusion

A multi-pronged intervention in the increasingly duopolistic dialysis industry is critical. Antitrust regulators and Congress must work together to more thoroughly review *all* future dialysis mergers, place limits on clinic ownership, and divest consummated anti-competitive mergers. Concurrently, Congress should amend Medicare policies to penalize firms like DaVita

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<sup>67</sup> *Ibid.*

<sup>68</sup> *Calendar Year 2024 End-Stage Renal Disease (ESRD) Prospective Payment System (PPS) Final Rule (CMS-1782-F)*, CENTER FOR MEDICARE AND MEDICAID SERVICES (Oct. 27, 2023), <https://www.cms.gov/newsroom/fact-sheets/calendar-year-2024-end-stage-renal-disease-esrd-prospective-payment-system-pps-final-rule-cms-1782-f>.

<sup>69</sup> Riley J. League et al., *Variability in Prices Paid for Hemodialysis by Employer-Sponsored Insurance in the US From 2012 to 2019*, JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, (2022) <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2789455>.

and Fresenius that take advantage of reimbursement plans. Dialysis procedures extend the lives of millions across the United States; increasing consolidation in the industry attempts to threaten this. Many of the solutions presented in this paper are neither quick nor easy. However, when deployed in concert, these policies can play an instrumental role in protecting competition in the dialysis market.