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Template Expert Report- Dialysis Merger

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About This Project

This expert report template is designed for an economist testifying on behalf of a state antitrust enforcement agency in a challenge to a merger between two competing outpatient dialysis providers. The template is meant to provide a foundation for a report that applies to a particular merger. Because dialysis provision exhibits consistency with respect to technology, regulation, and insurance payors, much of the economic analysis of dialysis mergers is conserved across providers and geographies. However, this template's analysis deals only with aspects of such cases that are common to all, and experts should expand on this analysis to account for any idiosyncratic elements of the acquisition in question.

Because this template's analysis is necessarily general, its findings do not apply to any one case. This document draws several conclusions about product market definition, local competition, and the effects of the acquisition; in practice, such conclusions are influenced by case-specific factors that are beyond the scope of this analysis. Experts should therefore subject every part of this report to verification and revision on the basis of the facts and law of the matter in question. And, in addition to tailoring the report to reflect the specific merger at issue, experts should also be careful to edit sections as drafted based on their own voice, expertise, research, and understanding of the industry and market.

The bulk of this document (pages 2-24) contains the template report. Pages 25-27 contain an appendix addressed to the expert. This appendix includes guidance and informational resources pertaining to potential quantitative analyses that are not mentioned in the template and data to support those analyses.

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I. Introduction

A. Experience and Qualifications

1. I am Author Name, Position. Insert relevant educational and professional credentials including, *inter alia*, (1) the institutions at which the expert received their bachelor's degree and any graduate degrees, as well as any academic honors that attended those degrees; (2) current and past positions held by the author that relate to this assignment; (3) academic journal articles or other publications that relate to this assignment; (4) professional awards, accomplishments, or commendations; and (5) any previous experience providing testimony in matters such as this one. My curriculum vitae is provided in Appendix A.

2. Insert description of the nature of author's employment or compensation by the Office of the Attorney General for their work on this case including, if applicable, the hourly rate of pay. My compensation is not contingent upon my findings or the outcome of the dispute.

B. Assignment and Materials Considered

3. I have been asked by counsel for Plaintiffs, the Office of the State Attorney General, to determine whether the proposed acquisition of Firm B by Firm A will substantially lessen

competition in the relevant antitrust markets. Specifically, I have been asked to consider the following economic questions:

a. Do Firm A and Firm B compete directly with each other?

b. How does the competition that may exist between Firm A and Firm B compare to that between the firms and third parties, if any exist?

c. Do outpatient dialysis services constitute an antitrust product market as defined in the 2023 DOJ-FTC Merger Guidelines?

d. Do the regions of [list regions] constitute geographic markets as defined in the 2023 DOJ-FTC Merger Guidelines?

e. Are third parties likely to enter the geographic product markets in a fashion that restores the pre-acquisition competitive intensity in a timely manner?

f. Will the acquisition reduce competition in any of the relevant antitrust markets?

g. Will efficiencies result from the acquisition that are likely to offset any anticompetitive effects in those markets?

h. These questions are samples that serve to structure the rest of the report. However, in a particular legal proceeding, the plaintiff's counsel will provide the questions that an expert should answer.

4. I understand from counsel that [Insert information on relevant state-specific legal rules and standards surrounding the presentation and use of economic evidence in antitrust proceedings. This includes, but is not limited to, the legal standard for demonstrating a substantial lessening of competition under state law and relevant precedent.]

5. In the course of preparing this report, I have reviewed documents, data, testimony, and other relevant materials produced in this matter. I have also reviewed and analyzed academic journal articles, data, and other information gathered from publicly available sources. Materials I have considered are set forth in the footnotes of this report, as well as Appendix B. Although I refer to statutes, case law, and medical procedures in my analysis of the facts of this case, I have not been asked, nor am I providing, legal or medical opinions.

6. The opinions expressed in this report reflect my review of documents, data, testimony, and other relevant materials to date. To the extent that continuing discovery reveals new

information relevant to this report, I reserve the right to supplement or amend the opinions enclosed.

II. Summary of Opinions

7. The conclusions reached in this report are summarized as follows:

   a. The relevant product market is outpatient dialysis services, and the relevant geographic market(s) in this matter is/are Geographic Regions.

   b. The proposed acquisition of Firm B by Firm A would substantially lessen competition. The merger would increase Firm A's bargaining leverage in negotiations with health plans and thereby facilitate price increases. It would also increase Firm A's incentive to degrade the quality of dialysis services.

   c. This lessening of competition would leave dialysis patients (and their payors) with higher prices, fewer choices, and lower-quality care. Ultimately, it is likely to result in a higher number of preventable deaths.

   d. There is no evidence to suggest that merger-specific, procompetitive efficiencies will fully, or partly, offset the anticompetitive effects of the acquisition in the relevant markets.

   e. Neither market entry nor the proliferation of home dialysis holds the potential to restore the pre-acquisition intensity of competition for several years, at least.

   f. Insert additional conclusions here as appropriate. Note that the conclusions above are, for the ease of the reader, formulated in the affirmative. These are, however, empirical conclusions that will differ across cases and should be left to the judgment of the expert.

III. Industry Background

A. The Merging Parties

8. This subsection should describe the commercial history of Firm A and Firm B, including all necessary background information to the analyses performed below. Information should include any previous mergers undertaken by either firm. This subsection should also mention if the firms have any unusual characteristics that set them apart from a typical dialysis chain (e.g., owned and operated by a university, or offers a broader/narrower range of services than do most other chains).

9. Next, the expert should describe the acquisition, identify the number of clinics operated by each firm, report market share estimates if already available, specify how many clinics

Firm A proposes to acquire and the location of those clinics, and mention other services provided by the firms beyond outpatient dialysis.

B. Third-Party Competitors

10. This subsection describes any other firms that operate clinics within the relevant geographic product market(s). If no competitors exist, this section can be eliminated.

C. Dialysis Care in State

11. Describe the competitive landscape for dialysis clinics in the relevant state.

D. The Dialysis Industry

1. End-Stage Renal Disease and Dialysis

12. The kidneys are bean-shaped organs responsible for filtering wastes and extra fluid from the blood. Healthy kidneys filter more than 90 milliliters of blood per minute,[1] ensuring a healthy balance of water, salts, and minerals (e.g., sodium, calcium, potassium).[2] The rate at which the kidneys filter blood is known as the glomerular filtration rate ("GFR").[3]

13. If the kidneys become damaged, they may become less efficient at filtering blood, resulting in a lower GFR. Inefficient filtration (i.e., "loss of kidney function") permits toxic wastes and extra fluid to accumulate in the body and, in doing so, increases the risk of high blood pressure, heart disease, and stroke.[4] Patients experiencing progressive damage and loss of function in the kidneys are diagnosed with chronic kidney disease ("CKD").[5] CKD affects one in seven adults in the United States.[6]

14. The final stage of CKD, when the kidneys have lost all or nearly all their function, is called end-stage renal disease ("ESRD") or kidney failure. Patients with ESRD have a GFR lower

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[1] Mayo Clinic. "End-Stage Renal Disease." Available at: https://www.mayoclinic.org/diseases-conditions/end-stage-renal-disease/diagnosis-treatment/drc-20354538.

[2] National Institute of Diabetes and Digestive and Kidney Diseases. "Your Kidneys & How They Work." Available at: https://www.niddk.nih.gov/health-information/kidney-disease/kidneys-how-they-work.

[3] Mayo Clinic. "End-Stage Renal Disease." Available at: https://www.mayoclinic.org/diseases-conditions/end-stage-renal-disease/diagnosis-treatment/drc-20354538.

[4] United States Centers for Disease Control and Prevention. "Chronic Kidney Disease in the United States." Available at: https://www.cdc.gov/kidney-disease/php/data-research/index.html.

[5] Mayo Clinic. "Chronic Kidney Disease – Symptoms & Causes." Available at: https://www.mayoclinic.org/diseases-conditions/chronic-kidney-disease/symptoms-causes/syc-20354521.

[6] United States Centers for Disease Control and Prevention. "Chronic Kidney Disease in the United States." Available at: https://www.cdc.gov/kidney-disease/php/data-research/index.html.

than 15 milliliters per minute, which is insufficient to keep a person alive without medical treatment.[7]

15. For patients on the kidney waiting list or who otherwise opt to forgo transplant, dialysis is the only treatment option. There are two distinct forms of dialysis: hemodialysis and peritoneal dialysis. Hemodialysis, the most common form of dialysis, involves the insertion of two needles into the patient's arm, each attached to a plastic tube that connects to a medical device called a dialyzer – or artificial kidney.[8] One tube draws the patient's blood into the artificial kidney, where the blood is filtered, and the other returns the filtered blood to the patient's body.[9] Peritoneal dialysis, a less common alternative to hemodialysis, involves the insertion of a soft plastic tube into the abdomen, which delivers dialysis fluid directly into the abdominal cavity.[10] The dialysis fluid is left in the abdomen for a designated period of time to absorb toxic wastes from the blood before being drained from the body.[11] Hemodialysis and peritoneal dialysis are both effective treatments for end-stage renal disease.

16. Hemodialysis may be performed at an outpatient dialysis center or at home. Hemodialysis at an outpatient dialysis center is generally performed three times a week and lasts for three to four hours per session.[12] Patients who choose home hemodialysis enjoy greater flexibility to select a treatment time and frequency that suits their schedule.[13] Common treatment schedules for home hemodialysis patients include: three weekly treatments of three-to-four hours each ("conventional home hemodialysis"), five-to-seven weekly

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[7] Mayo Clinic. "End-Stage Renal Disease." Available at: https://www.mayoclinic.org/diseases-conditions/end-stage-renal-disease/diagnosis-treatment/drc-20354538. See also, Mayo Clinic. "Chronic Kidney Disease – Symptoms & Causes." Available at: https://www.mayoclinic.org/diseases-conditions/chronic-kidney-disease/symptoms-causes/syc-20354521.

[8] Mayo Clinic. "Hemodialysis." Available at: https://www.mayoclinic.org/tests-procedures/hemodialysis/about/pac-20384824.

[9] Ibid.

[10] Mayo Clinic. "Peritoneal Dialysis." Available at: https://www.mayoclinic.org/tests-procedures/peritoneal-dialysis/about/pac-20384725. See also, DaVita. "Understanding Your Peritoneal Dialysis Catheter." Available at: https://davita.com/treatment-options/articles/preparing-for-peritoneal-dialysis-catheter-surgery/.

[11] Ibid.

[12] National Kidney Foundation. "Key Points: About Dialysis for Kidney Failure." Available at: https://www.kidney.org/key-points-about-dialysis-kidney-failure. See also, National Kidney Foundation. "Hemodialysis." Available at: https://www.kidney.org/kidney-topics/hemodialysis.

[13] National Kidney Foundation. "Choosing Dialysis: Which Type is Right for Me?" Available at: https://www.kidney.org/kidney-topics/choosing-dialysis-which-type-right-me?utm_source=Google&utm_medium=cpc&utm_campaign=&gad_source=1&gad_campaignid=23625038319&gbraid=0AAAAADJgwQYzHI1PrLaknn6RzT5kOITNr&gclid=CjwKCAjw7vzOBhBxEiwAc7WNr_npaYAUV-GWesKv_UhkXQV8RhgHvQX4qU-ynIpsk4kbne5d_lp4PhoCYV0QAvD_BwE.

treatments of two hours each ("short daily home hemodialysis"), and six weekly overnight treatments of six-to-eight hours each ("nocturnal home dialysis").[14]

17. Peritoneal dialysis is generally performed at home.[15] Patients who choose home peritoneal dialysis generally use one of two treatment modalities: continuous ambulatory peritoneal dialysis ("CAPD") or continuous cycling peritoneal dialysis ("CCPD").[16] The former makes use of only the abdominal lining, accessed via a catheter, to filter the patient's blood, and thus can be executed manually.[17] CCPD adds to the procedure an electronic cycler machine that injects and extracts the fluid into and from the patient's abdomen while they sleep.[18] Patients may opt for peritoneal dialysis over hemodialysis if they prefer to receive care at home or have certain physical and medical characteristics that make peritoneal dialysis a better fit.[19] Patients who receive home dialysis or their caregivers are usually responsible for operating the dialysis procedure, sometimes with intermittent support from the firm which administers the home dialysis program.[20] Usually, home dialysis programs are operated by the same dialysis clinics that offer outpatient services.[21]

18. Although patients may receive dialysis in a hospital setting, it is not generally considered an alternative to outpatient or home dialysis services for patients requiring long-term dialysis treatment. Patients with end-stage renal disease may receive inpatient dialysis services if, for example, they are hospitalized for an unrelated condition or health problem, but inpatient dialysis does not represent a feasible long-term treatment protocol for a patient who does not reside in a hospital.[22] All in all, about 90% of dialysis patients opt for in-center hemodialysis.[23]

2. The Outpatient Dialysis Industry

19. Outpatient dialysis services are provided by a firm or nonprofit entity that owns and operates a dialysis clinic.[24] In 2023, two firms, Fresenius Medical Care and DaVita,

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[14] National Kidney Foundation. "Home Dialysis: Hemodialysis and Peritoneal." Available at: https://www.kidney.org/kidney-topics/home-dialysis.

[15] Ibid.

[16] Ibid.

[17] Ibid.

[18] Ibid.

[19] Ibid.

[20] Ibid.

[21] Medicare Payment Advisory Commission (MedPAC). "Outpatient dialysis services." In Report to the Congress: Medicare Payment Policy. Available at: https://www.medpac.gov/wp-content/uploads/2025/03/Mar25_Ch5_MedPAC_Report_To_Congress_SEC.pdf.

[22] Summit Healthcare. "Inpatient Dialysis Explained in Simple Terms." Available at: https://summithealthcare.net/blog/inpatient-dialysis/inpatient-dialysis-explained-in-simple-terms/.

[23] Paul J. Eliason; Benjamin Heebsh; Ryan C. McDevitt. "How Acquisitions Affect Firm Behavior and Performance: Evidence from the Dialysis Industry." The Quarterly Journal of Economics. 135(1). 221–267.

[24] Centers for Medicare & Medicaid Services (CMS). "ESRD Surveyor Training: Interpretive Guidance." Available at: https://www.cms.gov/medicare/provider-enrollment-and-certification/guidanceforlawsandregulations/downloads/esrdpgmguidance.pdf.

accounted for 75% of clinics and patients covered by Medicare's fee-for-service plans.[25] The five largest firms accounted for 87% of both measures.[26] Nationally, the provision of outpatient dialysis services is highly concentrated.

20. The central service provided by a dialysis clinic is hemodialysis.[27] As hemodialysis machines can only serve one patient at a time, clinics are limited in capacity. Additionally, clinics offer training and support for home dialysis. They also administer and manage medications tied to patient care. Last, they may provide a range of laboratory testing, clinical monitoring, and counseling functions. Each clinic is required by law to retain a qualified nephrologist as the clinic's medical director.[28] Often, clinics will contract with a medical director on an exclusive basis.[29] In addition to supervising care, the nephrologist is often responsible for attracting some of the clinic's clientele, largely by referring their patients to the clinic at which they are the medical director.[30]

21. Outpatient clinics have two main revenue streams.[31] First, the clinic is paid for the dialysis treatment and related services. Second, the managing clinician or nephrologist is paid for their management of the patient's care. Given the advanced age of most ESRD patients and that ESRD automatically qualifies a patient for Medicare coverage, regardless of age, Medicare is the dominant payor for outpatient dialysis services.[32] Importantly, commercial insurers do not dictate reimbursement rates for outpatient services as does Medicare. Instead, the dialysis firm negotiates pricing with the insurer, and the outcome of that negotiation depends on the bargaining leverage of the dialysis firm and insurer.[33] As should be expected, commercial prices far outstrip Medicare prices. A recent study found that

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[25] Medicare Payment Advisory Commission (MedPAC). "Outpatient dialysis services." In Report to the Congress: Medicare Payment Policy. Available at: https://www.medpac.gov/wp-content/uploads/2025/03/Mar25_Ch5_MedPAC_Report_To_Congress_SEC.pdf.

[26] Ibid.

[27] Medicare Payment Advisory Commission (MedPAC). "Outpatient dialysis services." In Report to the Congress: Medicare Payment Policy. Available at: https://www.medpac.gov/wp-content/uploads/2025/03/Mar25_Ch5_MedPAC_Report_To_Congress_SEC.pdf.

[28] Centers for Medicare & Medicaid Services (CMS). "ESRD Surveyor Training: Interpretive Guidance." Available at: https://www.cms.gov/medicare/provider-enrollment-and-certification/guidanceforlawsandregulations/downloads/esrdpgmguidance.pdf.

[29] Xuyang Xia; Wanrong Deng; Paul J. Eliason; Riley J. League; Ryan C. McDevitt; James W. Roberts; Heather Wong. "Financial Ties, Market Structure, Commercial Prices, and Medical Director Compensation in Dialysis." JAMA Health Forum. 6(6). e252659.

[30] Ibid.

[31] Medicare Payment Advisory Commission (MedPAC). "Outpatient dialysis services." In Report to the Congress: Medicare Payment Policy. Available at: https://www.medpac.gov/wp-content/uploads/2025/03/Mar25_Ch5_MedPAC_Report_To_Congress_SEC.pdf.

[32] Ibid.

[33] Martin Gaynor; Kate Ho; Robert Town. "The Industrial Organization of Health-Care Markets." Journal of Economic Literature. 53(2). 235–284.

commercially insured patients represented 10% of outpatient treatments but 32% of revenue, with Medicare-sponsored patients accounting for the rest.[34]

a) Two-Stage Competition and Insurance Reimbursement

22. Competition in health care markets occurs at two stages.[35] First, health care providers compete for inclusion in health plans' networks. Second, once included, providers compete for patient volume. Competition in the first stage largely occurs on the basis of price; competition in the second stage occurs on dimensions of location, appointment availability, quality, physician relationships, and convenience.[36] At the first stage, a provider's negotiated rate depends in part on the degree to which the provider contributes to the insurer's network, or in other words, how costly it would be for the insurer to assemble an adequate network without that provider.[37] The more important the provider is to the insurer's network, the higher the rate the provider can negotiate.

23. Outpatient dialysis markets fit this framework. Of course, Medicare plays an unusually large role in dialysis reimbursement, and Medicare reimbursement rates are fixed administratively rather than negotiated through selective contracting.[38] However, for commercially insured patients, health plans still must bargain to assemble provider networks that offer substantial access to dialysis care.

24. At the second stage of competition, patients are in practice highly constrained in their choice of clinic, given that ESRD patients prize geographic proximity, face high switching costs, and may rely on nephrologist referrals or existing care relationships.[39] Competition for patient volume may therefore occur through location, chair availability, scheduling flexibility, relationships with referring nephrologists, perceived quality, and continuity of

[34] Medicare Payment Advisory Commission (MedPAC). "Outpatient dialysis services." In Report to the Congress: Medicare Payment Policy. Available at: https://www.medpac.gov/wp-content/uploads/2025/03/Mar25_Ch5_MedPAC_Report_To_Congress_SEC.pdf.

[35] Martin Gaynor; Kate Ho; Robert Town. "The Industrial Organization of Health-Care Markets." Journal of Economic Literature. 53(2). 235–284; Kate Ho; Robin S. Lee. "Insurer Competition in Health Care Markets." Econometrica. 85(2). 379–417.

[36] Ibid.

[37] Ibid.

[38] Medicare Payment Advisory Commission (MedPAC). "Outpatient dialysis services." In Report to the Congress: Medicare Payment Policy. Available at: https://www.medpac.gov/wp-content/uploads/2025/03/Mar25_Ch5_MedPAC_Report_To_Congress_SEC.pdf.

[39] Paul J. Eliason; Benjamin Heebsh; Ryan C. McDevitt. "How Acquisitions Affect Firm Behavior and Performance: Evidence from the Dialysis Industry." The Quarterly Journal of Economics. 135(1). 221–267.

care. The location of a clinic is especially salient for patients given the need for multiple hours-long visits each week.[40]

25. Each of these dimensions of second-stage competition affects patient choice and thus first-stage insurer bargaining. Above all, geographic adequacy is a critical consideration for insurers in constructing a network. A clinic or chain that is difficult for patients to replace will also be difficult for a health plan to exclude from its network. That clinic or chain will therefore have increased leverage when bargaining with the insurer over reimbursement rates.

26. To clarify, the fact that reimbursement rates for many procedures are set by Medicare does not make market power in the outpatient dialysis industry harmless. (By market power, economists mean the ability to raise price—or otherwise worsen terms of service—relative to what would prevail in a competitive market.[41]) This is for two reasons. First, as mentioned above, commercially insured patients account for a third of national revenue from outpatient treatments. Increased bargaining leverage can translate into higher prices through this pathway.

27. Second, greater bargaining leverage can also result in degraded service quality. Worsening the terms of service allows dialysis providers to cut costs and thus raise profits; therefore, with diminished competition, firms are incentivized not just to increase price but to decrease quality.[42] The incentive to degrade quality is especially strong for clinics that disproportionately serve patients covered by government insurers, such as Medicare, as reimbursement rates are fixed administratively.[43] However, while the prominent role of Medicare in outpatient dialysis services introduces an additional incentive to degrade quality, clinics that primarily serve patients covered by commercial insurance face this incentive, too.

28. Providers can worsen non-price terms of service by altering staffing levels, scheduling convenience, chair availability, clinical effort, facility quality, and support for transplant waitlisting. Empirical economic evidence suggests that such adjustments do occur

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[40] National Kidney Foundation. "Key Points: About Dialysis for Kidney Failure." Available at: https://www.kidney.org/key-points-about-dialysis-kidney-failure. See also, National Kidney Foundation. "Hemodialysis." Available at: https://www.kidney.org/kidney-topics/hemodialysis.

[41] Jean Tirole. Market Failures and Public Policy. American Economic Review. 105(6). 1665–82.

[42] Ibid.

[43] Thomas G. Wollmann, How to Get Away with Merger: Stealth Consolidation and Its Effects on U.S. Healthcare, NBER Working Paper No. 27274.

following consolidation in local dialysis markets.[44] When mergers remove competitive pressure from local markets, firms respond by degrading care in ways that increase profits.

29. Dialysis services are paid for by government payors, commercial insurers, or patients themselves. After meeting the Medicare Part B deductible, Medicare beneficiaries generally owe up to 20% of the Medicare-approved amount for covered dialysis services, though supplemental coverage may cover some or all of that coinsurance.[45] For commercially insured patients, negotiated rates are paid principally by the insurer, while patients may bear part of the cost through deductibles, copayments, or coinsurance. The burden of post-acquisition price increases does not fall only on insurers.

b) The Effect of Consolidation in the Dialysis Industry

30. Empirical evidence suggests that consolidation in a local outpatient dialysis market leads to higher prices. Xia et al. (2025) find that local markets with at least one independent dialysis clinic had mean prices $112 or eight percent lower than markets served only by large dialysis chains.[46] Additionally, Eliason et al. (2020) conclude that Medicare spending increases by 6.9% per treatment at independent dialysis facilities acquired by large chains, largely because of higher drug reimbursements.[47] As standard economic theory predicts, a more concentrated market suffers from higher prices.

31. Empirical evidence also consistently shows that consolidation in local markets worsens quality of care. Wollmann (2020) finds that increases in concentration result in lower facility quality and thus higher rates of hospitalization and death.[48] Eliason et al. (2020) show that patients at independent facilities are 4.2% more likely to be hospitalized in a given month after acquisition by a large chain, and the survival rate for new patients falls by roughly 2%.[49] New patients who start at an acquired clinic are 8.5% less likely to receive a kidney transplant or be added to a waitlist in their first year at the facility. In geographic

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[44] Paul J. Eliason, Benjamin Heebsh, Ryan C. McDevitt & James W. Roberts, How Acquisitions Affect Firm Behavior and Performance: Evidence from the Dialysis Industry, 135 Q.J. Econ. 221, 221–67 (2020); Thomas G. Wollmann, How to Get Away with Merger: Stealth Consolidation and Its Effects on U.S. Healthcare, NBER Working Paper No. 27274.

[45] Centers for Medicare & Medicaid Services. Medicare's Coverage of Kidney Dialysis & Kidney Transplant Benefits: Getting Started. Available at: https://www.medicare.gov/publications/11360-medicare-dialysis-kidney-transplant.pdf.

[46] Xuyang Xia; Wanrong Deng; Paul J. Eliason; Riley J. League; Ryan C. McDevitt; James W. Roberts; Heather Wong. "Financial Ties, Market Structure, Commercial Prices, and Medical Director Compensation in Dialysis." JAMA Health Forum. 6(6). e252659.

[47] Paul J. Eliason; Benjamin Heebsh; Ryan C. McDevitt; James W. Roberts. "How Acquisitions Affect Firm Behavior and Performance: Evidence from the Dialysis Industry." The Quarterly Journal of Economics. 135(1). 221–267.

[48] Thomas G. Wollmann. "How to Get Away with Merger: Stealth Consolidation and Its Effects on US Healthcare." National Bureau of Economic Research. Working Paper No. 27274. May 2020, revised March 2024.

[49] Paul J. Eliason; Benjamin Heebsh; Ryan C. McDevitt; James W. Roberts. "How Acquisitions Affect Firm Behavior and Performance: Evidence from the Dialysis Industry." The Quarterly Journal of Economics. 135(1). 221–267.

markets that become substantially more concentrated, the likelihood of death for dialysis patients increases by 8% post-acquisition. As standard economic theory predicts, a more concentrated market suffers from lower quality. In the case of outpatient dialysis, lower quality means worse health, and eventually, more deaths.

IV. Economic Analyses

32. In this section, I conduct qualitative and quantitative economic analyses that pertain to the questions asked by Counsel, and I answer those questions on the basis of the analyses. In my quantitative analyses, I rely on consumer data collected by the Office of the State Attorney General through an information-gathering form sent out to dialysis patients of all the firms. The expert should identify any other commercial or financial data used in conducting these analyses.

A. Outpatient Dialysis Services Constitute an Antitrust Product Market as Defined in the 2023 DOJ-FTC Merger Guidelines

33. The economic evidence produced in discovery and the economic literature on dialysis services confirm that outpatient dialysis services constitute an antitrust product market. Four reasons motivate this conclusion: (1) the significant product differentiation between, on one hand, outpatient dialysis services and, on the other hand, inpatient dialysis, home dialysis, and kidney transplants; (2) empirical economic observation of market power in the outpatient dialysis market, (3) the ubiquitous treatment of outpatient dialysis as a discrete product market in the economic literature; and (4) documentary evidence showing that both Firm A and Firm B understand outpatient dialysis services to constitute a discrete product market.

34. I begin with the first reason: product differentiation. Outpatient dialysis, inpatient dialysis, home dialysis, and kidney transplants are all highly differentiated services. In fact, it is inappropriate to understand each as a different version of the same core product, rather than discrete services that serve different purposes. Of course, each can technically be used to treat patients with ESRD. But each service is highly differentiated in cost, mode and site of administration, and patient fit and eligibility. Consequently, many outpatient dialysis patients have little to no ability to switch to one of the other service types. Outpatient dialysis services thus constitute an antitrust product market.

35. Economists define the bounds of an antitrust market by examining the degree to which products are substitutes for each other.[50] For example, tap water is a very good substitute for bottled water, but ethanol is not. One way that economists operationalize this notion is through the Hypothetical Monopolist Test (HMT), which asks whether or not a monopolist

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[50] United States Department of Justice; Federal Trade Commission. Merger Guidelines. § 4.3. December 18, 2023. Available at: https://www.justice.gov/atr/merger-guidelines.

could profitably raise prices or worsen quality across a narrow range of products.[51] If so, products outside of that narrow range must not be good substitutes, and that narrow range constitutes an antitrust market. If not, then other products must be good substitutes, and that narrow range is not an antitrust market.

36. It is easy to apply this insight to dialysis. First, consider inpatient dialysis services. These services can only be administered by hospitals to patients admitted to those hospitals. However, the vast majority of patients who access dialysis are not admitted to hospitals.[52] Still, they must receive treatment three times per week.[53] For most dialysis patients, then, inpatient services are not a substitute for outpatient services.

37. Second, consider home dialysis. Although a small portion of ESRD patients outside of hospitals opt for peritoneal dialysis at home, it is for many reasons a highly imperfect substitute for outpatient dialysis and thus does not belong in the same antitrust market. First, home dialysis entails significant fixed and switching costs. A hypothetical outpatient customer transitioning to home dialysis requires training, equipment installation, supplies, monitoring, and often ongoing support from a dialysis clinic.[54] These frictions make switching difficult, and weaken the substitutability of home dialysis for outpatient. Second, even when customers make the switch, home dialysis often functions as a partial, not full, replacement for outpatient dialysis. Many home dialysis patients maintain a relationship with a dialysis clinic for supervision, occasional in-person visits, and access to clinic services beyond dialysis.[55] Third, and most importantly, many dialysis patients simply are not candidates for home dialysis. For those who face severe clinical conditions, frailty, or lack of caregiver support, home dialysis is off the table.[56] These barriers to access are borne out in the fact that more than 90% of patients choose outpatient dialysis.[57] In sum, for most patients, home dialysis is a highly imperfect substitute, and for many patients, it is no substitute at all.

38. Last, some patients with ESRD can treat their condition permanently through a kidney transplant. Transplants are often the most effective form of treatment, but for most patients,

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[51] United States Department of Justice; Federal Trade Commission. Merger Guidelines. § 4.3.A. December 18, 2023. Available at: https://www.justice.gov/atr/merger-guidelines

[52] Medicare Payment Advisory Commission (MedPAC). "Outpatient dialysis services." In Report to the Congress: Medicare Payment Policy. Available at: https://www.medpac.gov/wp-content/uploads/2025/03/Mar25_Ch5_MedPAC_Report_To_Congress_SEC.pdf.

[53] Ibid.

[54] Ibid.

[55] Vinay N. Krishna; Kamesha Managadi; Michael Smith; Eric L. Wallace. "Telehealth in the Delivery of Home Dialysis Care: Catching up With Technology." Advances in Chronic Kidney Disease. 24(1). 12–16. 2017.

[56] Medicare Payment Advisory Commission (MedPAC). "Outpatient dialysis services." In Report to the Congress: Medicare Payment Policy. Available at: https://www.medpac.gov/wp-content/uploads/2025/03/Mar25_Ch5_MedPAC_Report_To_Congress_SEC.pdf.

[57] Ibid.

they are inaccessible due either to poor physical condition or an organ shortage.[58] Less than a fifth of dialysis patients were on a kidney waitlist as of 2019. And even that fifth must spend at median 3.6 years waiting for a transplant, during which they must receive dialysis services.[59] Kidney transplants are also not a close substitute for outpatient dialysis.

39. This analysis reveals that none of the considered alternatives are close enough substitutes for outpatient dialysis. For many patients, they are not a substitute at all. This lack of substitutability means that a hypothetical monopolist could certainly profit by raising prices or worsening terms for outpatient dialysis services. Patients would not be able to switch to other services and thus force a monopolist to keep prices down.

40. That brings us the second reason that outpatient services constitute a separate antitrust market. Empirical economic research overwhelmingly demonstrates that dialysis clinics with market power in a geographic market can in fact raise prices or worsen terms. After consolidations, dialysis clinics worsen terms of service in a variety of ways, including by replacing highly skilled nurses with less-skilled technicians, operating fewer dialysis machines, and waitlisting fewer patients for kidney transplants.[60] Unsurprisingly, patients suffer worse care outcomes as a result of these changes. Additionally, overall Medicare spending increases at these facilities, mostly due to increased use of high-reimbursement drugs. To summarize, dialysis clinics that gain market power both raise prices and decrease quality. Many studies reinforce these insights.[61] This is strong evidence that the outpatient dialysis market passes the hypothetical monopolist test.

41. The third reason to conclude that outpatient services constitute a standalone antitrust market is that the economic literature regularly treats it as such.[62] Economic papers that

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[58] Paul J. Eliason; Benjamin Heebsh; Ryan C. McDevitt. "How Acquisitions Affect Firm Behavior and Performance: Evidence from the Dialysis Industry." The Quarterly Journal of Economics. 135(1). 221–267.

[59] Ibid.

[60] Thomas G. Wollmann. "How to Get Away with Merger: Stealth Consolidation and Its Effects on US Healthcare." National Bureau of Economic Research. Working Paper No. 27274. May 2020, revised March 2024; Paul J. Eliason; Benjamin Heebsh; Ryan C. McDevitt; James W. Roberts. "How Acquisitions Affect Firm Behavior and Performance: Evidence from the Dialysis Industry." The Quarterly Journal of Economics. 135(1). 221–267.

[61] Ibid; Xuyang Xia; Wanrong Deng; Paul J. Eliason; Riley J. League; Ryan C. McDevitt; James W. Roberts; Heather Wong. "Financial Ties, Market Structure, Commercial Prices, and Medical Director Compensation in Dialysis." JAMA Health Forum. 6(6). e252659.

[62] Paul J. Eliason; Benjamin Heebsh; Ryan C. McDevitt; James W. Roberts. "How Acquisitions Affect Firm Behavior and Performance: Evidence from the Dialysis Industry." The Quarterly Journal of Economics. 135(1). 221–267. 10.1093/qje/qjz034; Kevin F. Erickson; Yuanchao Zheng; Wolfgang C. Winkelmayer; Vivian Ho; Jay Bhattacharya; Glenn M. Chertow. "Consolidation in the Dialysis Industry, Patient Choice, and Local Market Competition." Clinical Journal of the American Society of Nephrology. 12(3). 536–545. 10.2215/CJN.06340616; Kevin F. Erickson; Wolfgang C. Winkelmayer; Vivian Ho; Jay Bhattacharya; Glenn M. Chertow. "Market Consolidation and Mortality in Patients Initiating Hemodialysis." Value in Health. 22(1). 69–76. 10.1016/j.jval.2018.06.008; David Cutler; Leemore S. Dafny; Christopher Ody. "How Does Competition Impact Quality of Care? A Case Study of the U.S. Dialysis Industry." Working Paper. 2016; Thomas G. Wollmann. "How to Get Away with Merger: Stealth Consolidation and Its Effects on US Healthcare." National Bureau of Economic Research. Working Paper No. 27274. May 2020, revised March 2024. 10.3386/w27274.

deal with dialysis services regularly focus their inquiry only on in-center hemodialysis, given weak substitutability with other services and that over 90% of dialysis patients choose this option. The assumption underlying these analyses is that outpatient services can be treated as a discrete market when assessing market power, consolidation, and economic outcomes.

42. Fourth, documentary evidence produced in discovery supports the definition of outpatient dialysis services as an antitrust product market. At this point, the report can reference any facts that imply that the firms implicitly or explicitly recognized or treated outpatient services as a standalone product market.

43. These four considerations—product differentiation, empirical evidence of market power, consistent treatment by other economists, and fit with qualitative evidence—all support the conclusion that outpatient dialysis services are an antitrust product market.

B. The Identified Geographic Region(s) Constitute Antitrust Market(s) as Defined in the 2023 DOJ-FTC Merger Guidelines

44. Antitrust markets have both a product and a geographic component. Above, I concluded that outpatient dialysis services satisfy the product component.[63] In this subsection, I conclude that the geographic regions satisfy the geographic component.

45. Patients strongly prefer not to travel long distances to receive outpatient dialysis services. Mainly, that is because patients undergo treatment three times per week for multiple hours per session.[64] Traveling, for example, an hour to and from a clinic adds six hours weekly to an already time-intensive procedure. If patients lack dedicated caregivers, it may be especially difficult to find transportation to a clinic far away from their residence.[65] Lengthy commutes are also themselves harmful for frailer patients facing tougher clinical conditions.[66]

46. Empirical evidence strongly supports the claim that far-away dialysis clinics are weak substitutes for closer clinics. To start, patients do in fact receive care very close to their

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[63] United States Department of Justice; Federal Trade Commission. Merger Guidelines. § 4.3. December 18, 2023. Available at: https://www.justice.gov/atr/merger-guidelines.

[64] Medicare Payment Advisory Commission (MedPAC). "Outpatient dialysis services." In Report to the Congress: Medicare Payment Policy. Available at: https://www.medpac.gov/wp-content/uploads/2025/03/Mar25_Ch5_MedPAC_Report_To_Congress_SEC.pdf.

[65] Ibid.

[66] Louise M. Moist; Jennifer L. Bragg-Gresham; Ronald L. Pisoni; Rajiv Saran; Takashi Akiba; Stefan H. Jacobson; Shunichi Fukuhara; Donna L. Mapes; Hugh C. Rayner; Akira Saito; Friedrich K. Port. "Travel Time to Dialysis as a Predictor of Health-Related Quality of Life, Adherence, and Mortality: The Dialysis Outcomes and Practice Patterns Study (DOPPS)." American Journal of Kidney Diseases. 51(4). 641–650. 10.1053/j.ajkd.2007.12.021; Stephanie Thompson; John Gill; Xiaoming Wang; Raj Padwal; Rick Pelletier; Aminu Bello; Scott Klarenbach; Marcello Tonelli. "Higher Mortality Among Remote Compared to Rural or Urban Dwelling Hemodialysis Patients in the United States." Kidney International. 82(3). 352–359. 10.1038/ki.2012.167.

homes. An analysis by Erickson et al. (2016) found that "on average, 90% of patients received dialysis at a facility within 18 miles…of their reported residence in 2001."[67] This finding implies a revealed preference for clinics within roughly that radius.

47. Even better evidence for the relevant geographic market(s) is that higher travel distances for outpatient dialysis are associated with materially worse care outcomes. A 2008 study of 20,994 hemodialysis patients across multiple countries found that travel time to the nearest dialysis treatment is significantly associated with greater mortality risk and lower health-related quality of life.[68] A 2012 analysis by Thompson et al. similarly concluded that living farther away from a dialysis clinic significantly increased one's mortality risk.[69] Increased travel distance doesn't just deter patients through the time-cost of travel; it worsens the quality of the service. In both senses, far-away clinics are a poor substitute for closer clinics. Recognizing this fact, the economic literature on outpatient dialysis consistently treats dialysis competition as highly local.[70]

48. As explained above in Section III.D.2(a), insurers must construct adequate networks of dialysis clinics for their plan holders. The localized nature of dialysis care means that insurers will have little choice but to contract with dialysis clinics that are easily accessible for the plan holders. Insurers thus have strong preferences for clinics that are near to the insurer's plan holders. This fact reinforces the claim that the market for outpatient services is highly local.

49. The expert should now apply this background to the geographic markets defined by the State Attorney General. Given the highly local nature of dialysis competition, any regional market encompassing a greater metropolitan area can very likely be defined as a geographic

[67] Kevin F. Erickson; Wolfgang C. Winkelmayer; Vivian Ho; Jay Bhattacharya; Glenn M. Chertow. "Market Consolidation and Mortality in Patients Initiating Hemodialysis." Value in Health. 22(1). 69–76. 10.1016/j.jval.2018.06.008.

[68] Louise M. Moist; Jennifer L. Bragg-Gresham; Ronald L. Pisoni; Rajiv Saran; Takashi Akiba; Stefan H. Jacobson; Shunichi Fukuhara; Donna L. Mapes; Hugh C. Rayner; Akira Saito; Friedrich K. Port. "Travel Time to Dialysis as a Predictor of Health-Related Quality of Life, Adherence, and Mortality: The Dialysis Outcomes and Practice Patterns Study (DOPPS)." American Journal of Kidney Diseases. 51(4). 641–650.

[69] Stephanie Thompson; John Gill; Xiaoming Wang; Raj Padwal; Rick Pelletier; Aminu Bello; Scott Klarenbach; Marcello Tonelli. "Higher Mortality Among Remote Compared to Rural or Urban Dwelling Hemodialysis Patients in the United States." Kidney International. 82(3). 352–359.

[70] Kevin F. Erickson; Yuanchao Zheng; Wolfgang C. Winkelmayer; Vivian Ho; Jay Bhattacharya; Glenn M. Chertow. "Consolidation in the Dialysis Industry, Patient Choice, and Local Market Competition." Clinical Journal of the American Society of Nephrology. 12(3). 536–545. 10.2215/CJN.06340616; Thomas G. Wollmann. "How to Get Away with Merger: Stealth Consolidation and Its Effects on US Healthcare." National Bureau of Economic Research. Working Paper No. 27274. May 2020, revised March 2024. 10.3386/w27274; Xuyang Xia; Wanrong Deng; Paul J. Eliason; Riley J. League; Ryan C. McDevitt; James W. Roberts; Heather Wong. "Financial Ties, Market Structure, Commercial Prices, and Medical Director Compensation in Dialysis." JAMA Health Forum. 6(6). e252659. 10.1001/jamahealthforum.2025.2659.

market.[71] Travel maxima of 30 miles or 30 minutes are also very likely to delimit an antitrust market.[72] Any qualitative evidence produced in discovery that supports these geographic markets should also be mentioned here.

C. Firm A and Firm B Are Direct Competitors

50. The expert should begin by highlighting qualitative evidence that supports the assertion that Firm A and B are direct competitors, if this is indeed the case. The choice of evidence will depend on the facts of the case. Qualitative evidence to include here will be any details about the firms' services, clientele, locations, reputations, corporate histories, internal and external communications, and customer and executive testimony that suggests that the two firms are competitors or saw themselves as such. This qualitative discussion is light on economic reasoning and heavy on documentary evidence, so it can remain relatively short. It should also only reference evidence with economic, not merely legal, relevance; in other words, this section should offer economic analyses of the acquisition that go beyond those offered in the complaint.

51. Similarly, if there is qualitative evidence that demonstrates that Firm A and Firm B compete with other firms in the relevant market, and speaks to the strength of such competition, the expert should report it here.

52. The expert should next move to quantitative analyses. First, the expert should report the degree to which the merging firms' customers overlap in location. Usually, the geographic unit in that analysis will be a zip code, unless a more granular or informative measure is available. The expert can begin by reporting these results graphically. A clean map of the relevant geographic markets that visualizes the locations of customers for both firms, and their overlap, can be compelling evidence of direct competition.

53. Next, the expert should report the same results numerically. The expert should construct market shares and an HHI index both for the antitrust market as a whole and for the particular geographic units visualized above. (Of course, only the first is able to activate a structural presumption against the acquisition. The more granular HHI measurements are only useful for demonstrating numerically, not just graphically, that particular locations that enjoyed competition prior to the acquisition will no longer. Separately, the Merger Guidelines are clear that economists may formulate market share and HHI metrics using a

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[71] Federal Trade Commission. In the Matter of DaVita Inc. and Total Renal Care, Inc. File No. 211-0013. Docket No. C-4752. Decision and Order. January 12, 2022. Available at: https://www.ftc.gov/legal-library/browse/cases-proceedings/2110013-davita-inc-total-renal-care-inc-matter.

[72] Federal Trade Commission. In the Matter of DaVita Inc. File No. 051-0051. Docket No. C-4152. Decision and Order. October 25, 2005. Available at: https://www.ftc.gov/legal-library/browse/cases-proceedings/0510051-davita-inc; Federal Trade Commission. In the Matter of DaVita Inc. and Total Renal Care, Inc. File No. 211-0013. Docket No. C-4752. Decision and Order. January 12, 2022. Available at: https://www.ftc.gov/legal-library/browse/cases-proceedings/2110013-davita-inc-total-renal-care-inc-matter.

variety of metrics, not just revenue.[73] So the expert could construct market-level HHI and market share metrics using revenue, patient count, procedure count, or other measurements of income or volume. At the level of individual geographic units, however, patient count may be the only available metric.) When presenting these results, the economist should note the increase in HHI—both market-wide and within each geographic unit—that will result from the merger. Wollmann (2020) p. 45 reports enforcement rates for reported mergers by the change in HHI; this informs as to the levels of change that are usually deemed problematic.

54. Any other analyses that bear on the question of head-to-head competition between the two firms, and for which the expert has sufficient data, can be reported here.

D. Third Parties are Unlikely to Enter the Relevant Market in a Timely Fashion that Restores Pre-Acquisition Competitive Intensity

55. The market for outpatient dialysis services faces high barriers to entry, making it extremely unlikely that third parties are likely to enter the relevant geographic product markets in a timely fashion that restores pre-acquisition competition. First, every dialysis clinic is required by law to retain a nephrologist physician as medical director.[74] The director supervises clinic operations and is also responsible for attracting a substantial portion of its clientele through referrals. These medical directors also often sign exclusive contracts with dialysis chains.[75] If a new dialysis clinic were to enter a local market, it might struggle to find a medical director with the local connections needed to attract clients. Second, dialysis clinics face a regulatory environment that makes entry both costly and slow. Wollmann (2020) writes that "entry into markets with an incumbent provider is often expensive if not impossible. Many areas of the country require that entrants prove that the community 'needs' additional capacity, creating large entry barriers."[76] These regulatory barriers can delay entry by several years or bar it entirely.[77] Third, the fixed costs to open a dialysis clinic are high, making entry costlier.[78] Fourth, the provision of outpatient dialysis services

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[73] United States Department of Justice; Federal Trade Commission. Merger Guidelines. § 4.4. December 18, 2023. Available at: https://www.justice.gov/atr/merger-guidelines.

[74] Xuyang Xia; Wanrong Deng; Paul J. Eliason; Riley J. League; Ryan C. McDevitt; James W. Roberts; Heather Wong. "Financial Ties, Market Structure, Commercial Prices, and Medical Director Compensation in Dialysis." JAMA Health Forum. 6(6). e252659.

[75] Ibid.

[76] Thomas G. Wollmann. "How to Get Away with Merger: Stealth Consolidation and Its Effects on US Healthcare." National Bureau of Economic Research. Working Paper No. 27274. May 2020, revised March 2024. 10.3386/w27274.

[77] Ibid.

[78] Thomas G. Wollmann. "How to Get Away with Merger: Stealth Consolidation and Its Effects on US Healthcare." National Bureau of Economic Research. Working Paper No. 27274. May 2020, revised March 2024. 10.3386/w27274; Paul J. Eliason; Benjamin Heebsh; Ryan C. McDevitt. "How Acquisitions Affect Firm Behavior and Performance: Evidence from the Dialysis Industry." The Quarterly Journal of Economics. 135(1). 221–267.

is extremely concentrated on a national level, meaning that scaled competitors with the capacity to enter local markets are few and far between.[79]

56. The empirical evidence on local market concentration is consistent with this analysis. Multiple studies have found that a large portion of local dialysis markets are in fact highly concentrated.[80] If barriers to entry were low enough to allow entrants to promptly return consolidated markets to competitive conditions, we would not expect to see such extreme levels of concentration in local markets.

57. This paragraph should introduce any documentary evidence from discovery that suggests that entry will not succeed in returning markets to preacquisition competitive conditions in a timely fashion.

58. In sum, the barriers to entry in the outpatient dialysis services market are not low enough to override the baseline antitrust expectation that entry will not be sufficient to return consolidated markets to their pre-acquisition competitive intensity in a timely fashion.[81] In fact, barriers to entry are unusually high in this industry. When greater concentration resulting from a merger allows a firm to exercise market power, entry is not likely to restore the lost competition and prevent or deter the exercise of that market power.

E. Procompetitive Efficiencies Are Unlikely to Fully Offset Anticompetitive Effects in Those Markets

59. I have also been asked to determine whether the acquisition is likely to generate procompetitive efficiencies large enough to offset any anticompetitive effects in the relevant markets. The 2023 Merger Guidelines advise that purported efficiencies are only cognizable if they are verifiable, merger-specific, and likely to prevent the transaction from substantially lessening competition in the relevant market.[82] Elaborate on any state law or precedent that modifies this standard. The question is not just whether the transaction will reduce costs, raise profits, or improve quality for the merging parties. Rather, efficiencies must be confirmable *ex ante*; they must be unrealizable through alternatives to acquisition;

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[79] Xuyang Xia; Wanrong Deng; Paul J. Eliason; Riley J. League; Ryan C. McDevitt; James W. Roberts; Heather Wong. "Financial Ties, Market Structure, Commercial Prices, and Medical Director Compensation in Dialysis." JAMA Health Forum. 6(6). e252659.

[80] Kevin F. Erickson; Yuanchao Zheng; Wolfgang C. Winkelmayer; Vivian Ho; Jay Bhattacharya; Glenn M. Chertow. "Consolidation in the Dialysis Industry, Patient Choice, and Local Market Competition." Clinical Journal of the American Society of Nephrology. 12(3). 536–545. 10.2215/CJN.06340616; Kevin F. Erickson; Wolfgang C. Winkelmayer; Vivian Ho; Jay Bhattacharya; Glenn M. Chertow. "Market Consolidation and Mortality in Patients Initiating Hemodialysis." Value in Health. 22(1). 69–76. 10.1016/j.jval.2018.06.008; Xuyang Xia; Wanrong Deng; Paul J. Eliason; Riley J. League; Ryan C. McDevitt; James W. Roberts; Heather Wong. "Financial Ties, Market Structure, Commercial Prices, and Medical Director Compensation in Dialysis." JAMA Health Forum. 6(6). e252659. 10.1001/jamahealthforum.2025.2659.

[81] United States Department of Justice; Federal Trade Commission. Merger Guidelines. § 3.2. December 18, 2023. Available at: https://www.justice.gov/atr/merger-guidelines/rebuttal-evidence.

[82] United States Department of Justice; Federal Trade Commission. Merger Guidelines. § 3.3. December 18, 2023. Available at: https://www.justice.gov/atr/merger-guidelines/rebuttal-evidence.

and they must offset any anticompetitive effects in *this* antitrust market, not at the national level.[83] Efficiencies that accrue to Firm A across its national business, or to unrelated service lines, cannot offset harm in a specific outpatient dialysis market.

60. As a general matter, prior evidence from the dialysis industry supports caution in accepting generalized efficiency claims. Existing empirical work does not show that acquisitions uniformly reduce costs or improve patient outcomes. To the contrary, Eliason et al. find that acquired independent facilities increased Medicare spending per treatment and experienced worsened patient outcomes after acquisition.[84] Other studies similarly associate consolidation in outpatient dialysis markets with higher prices, reduced quality, or worse patient outcomes.[85] These studies are not definitive guides to the particular transaction at hand. They do, however, show that such acquisitions should not be presumed to reduce prices, improve quality, or offset lost competition in the relevant markets. In the absence of compelling evidence of merger-specific, local efficiencies, the relevant economic literature does not support an efficiencies defense.

61. The author can next discuss any qualitative evidence surfaced in discovery that bears on the question of efficiencies.

62. Last, the author can perform quantitative analyses that bear on the question of efficiencies. The analyses an expert can perform to address this question are heavily constrained by the availability of data. Ideally, Firm A will have acquired outpatient dialysis clinics in the past and will provide data relating to treatments, outcomes, revenue, and insurance claims at those acquired clinics. The expert can then test whether those previous transactions reduced overall healthcare costs for the affected patients. One way to do this is with a difference-in-differences regression wherein the "treatment group" is patients under the care of outpatient dialysis clinics previously acquired by Firm A and the "control group" is patients under the care of comparable, independent outpatient dialysis clinics. In the absence of such data, the expert may not be able to provide quantitative analyses that speak to this question. See the "merger retrospectives" section in the expert appendix below.

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[83] Ibid.

[84] Paul J. Eliason; Benjamin Heebsh; Ryan C. McDevitt; James W. Roberts. "How Acquisitions Affect Firm Behavior and Performance: Evidence from the Dialysis Industry." The Quarterly Journal of Economics. 135(1). 221–267.

[85] Thomas G. Wollmann. "How to Get Away with Merger: Stealth Consolidation and Its Effects on US Healthcare." National Bureau of Economic Research. Working Paper No. 27274. May 2020, revised March 2024; Xuyang Xia; Wanrong Deng; Paul J. Eliason; Riley J. League; Ryan C. McDevitt; James W. Roberts; Heather Wong. "Financial Ties, Market Structure, Commercial Prices, and Medical Director Compensation in Dialysis." JAMA Health Forum. 6(6). e252659.

V. The Proposed Acquisition Will Diminish Competition in the Relevant Market(s)

63. This section revisits the questions asked at the beginning of the report and explains what we can conclude from the economic analyses above.

64. The analyses above reveal that the provision of outpatient dialysis services in the identified regions constitutes an antitrust market as defined in the 2023 DOJ-FTC Merger Guidelines. As clearly demonstrated by the qualitative and empirical evidence in Section VI, no other form of ESRD treatment is a close enough substitute for outpatient dialysis to merit inclusion in the same product market. Similarly, patients' reluctance or inability to travel long distances for regular hemodialysis means that clinics outside of the relevant geographic markets do not merit inclusion either.

65. I also conclude that Firm A and Firm B do or do not compete directly for customers in the same locales. This paragraph(s) should explain how the qualitative evidence and quantitative analysis allow the expert to draw this conclusion and note any qualifications to that conclusion. It should slowly and carefully connect the dots between those analyses and a finding of diminished competition. The expert should make sure to connect the levels of and changes in HHI from Section V to the structural presumptions established in the Merger Guidelines, federal precedent, and state precedent, if applicable.

66. Additionally, I conclude that third parties are not likely to enter the geographic markets in a timely fashion that restores pre-acquisition competitive intensity to the provision of outpatient dialysis services. Barriers to entry in the outpatient dialysis market are unusually high, as explained in Section VI, making entry costly, slow, and in this case, highly unlikely.

67. All in all, I conclude that the proposed acquisition will reduce competition in the identified antitrust markets. Firm A and Firm B compete directly and substantially for outpatient dialysis customers in the relevant geographic markets, especially certain zip codes if applicable, and the diminution of this rivalry will eliminate the competitive pressure on both firms to keep prices down and improve quality. Firm A will gain bargaining leverage over commercial insurers, giving it the ability to increase reimbursement rates over their counterfactual level. Additionally, Firm A will lose the competitive pressures that prevent it from worsening quality in order to increase profits.

68. There is no reason to expect that merger-specific, local procompetitive efficiencies will offset all, or even some, of the competitive losses from this acquisition.

69. This lessening of competition will worsen economic and health outcomes in the markets. Patients and payors (specifically commercial insurers) will face higher prices.

Additionally, patients will suffer from decreases in quality of care.[86] Ultimately, given the vital importance of dialysis services for number of patients in name of geographic region, this loss of competition will translate directly into lives lost.

VI. Conclusion

70. This report has answered a range of questions about the competitive effects of Firm A's acquisition of Firm B through the use of qualitative and quantitative economic evidence. My findings lead me to conclude that the acquisition will substantially lessen competition in the market for the provision of outpatient dialysis services in geographic regions in a fashion that is unlikely to be ameliorated by timely entry.

VII. Appendix A

71. This appendix should enclose a copy of the expert's CV.

VIII. Appendix B

72. This appendix should set forth a list of all the legal, economic, academic, and documentary sources the expert relied upon in the formation of this report. Sources cited in this template are listed below.

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[86] See Section III.D.2(b) for empirical evidence in favor of this claim.

IX. Appendix on Quantitative Analyses and Data (Addressed to Expert)

This appendix is not part of the expert report template. Instead, it contains (1) clarifications on quantitative analysis mentioned above and (2) information and guidance pertaining to further quantitative analyses that an expert might perform. These further analyses are relegated to the appendix because they will not always be achievable in a state-level economic expert report, given constraints of time, resources, and data. Nor are they strictly necessary to produce a convincing report. Last, this appendix also includes (3) guidance pertaining to data that an expert might use to support these analyses.

A. Quantitative Analyses

a. Market Shares and HHI Metric Selection

As mentioned above, market shares and HHI can be calculated with respect to a variety of metrics. Common choices include revenue, patient count, and procedure count. Experts may calculate market shares according to some or all of these metrics. If all metrics tell the same story about competition in the relevant market, then it can be worthwhile to underscore that fact. If one metric tells a different story than the others, the expert should exercise discretion in deciding whether and how to report it.

Patient count metrics are often the most revealing about patient choice, and, of course, patient choice is upstream of insurer-provider bargaining. Patient count is therefore an informative metric. Procedure count tends to closely track patient count. Revenue is a helpful metric, but it can be confounded by the portion of a clinic's patients who are covered by commercial insurers. Capacity measures such as stations, machines, and chairs may be used, but in a supplementary fashion. Each of these metrics appears in the economic literature. Erickson et al. (2016) use patient shares, and Wollmann (2020) uses machine count as a robustness check. FTC complaints pertaining to dialysis mergers tend not to report the denominator used in calculating market shares.

b. Geographic Market Definition

As discussed above, the FTC has consistently defined geographic markets on the basis of the assumption that patients are unwilling to travel more than 30 miles or 30 minutes to receive care. See *DaVita/Gambro* (2005), *DaVita/DSI* (2011), and *DaVita/University of Utah Health* (2021). The FTC has used this rule to justify delimiting markets equal to greater metropolitan areas or other contiguous communities. To move from travel radius to geographic market, the expert should identify the consumers within the specified distance of the acquired clinic(s). (Or the expert could simply identify where the clinic's customers do in fact reside, if the data permit.) The expert then

applies the travel distance heuristic again to determine which other clinics can reasonably be considered competitors of the acquired clinic(s).

More advanced econometric techniques can also be used to define a geographic market, although they are not necessary ingredients for a compelling expert report. The Elzinga-Hogarty method reports what percentage of consumers inside a region receive care inside that region; it can be useful for verifying that a market does indeed contain most of the patient flow for a particular clinic or set of clinics. But it does not necessarily inform as to diversion patterns, and it should be treated as supplementary to driving distance heuristics. See Gaynor, Kleiner, and Vogt (2012) for a concise explanation of the Elzinga-Hogarty method and how to apply it to such cases. Another method of market definition in health provision cases is critical loss analysis.

c. Critical Loss Analysis

Critical loss analysis is an operationalization of the hypothetical monopolist test. It asks "if a hypothetical monopolist controlled all outpatient dialysis clinics in the geographic market, what amount of patients/treatments/revenues could it afford to lose before a price increase or worsening of terms became unprofitable?" Usually, critical loss analyses consider hypothetical increases in price. The fact that competition in dialysis markets centers around location and quality makes the analysis more difficult. See Hüschelrath, *Competition Policy Analysis*, § 6.4, for a technical discussion of critical loss analysis. As advanced econometric analyses like critical loss are not essential for a high-quality expert report on a dialysis acquisition, the expert should not attempt this analysis without all the requisite data.

d. Merger Retrospectives

As mentioned above, the expert will likely be asked to comment on the potential for the acquisition to result in procompetitive efficiencies that offset any anticompetitive effects. The empirical economic literature on outpatient dialysis clinic acquisitions is a sufficient basis to conclude that there is no reason to expect such efficiencies. An expert could also offer an econometric analysis of Firm A's previous acquisitions, if any exist and if Firm A provides data pertaining to the commercial trajectory of the acquired clinics. Evidence that acquired clinics did not enjoy efficiencies would cut strongly against an efficiencies rebuttal argument.

The expert could perform this retrospective with a simple difference-in-differences analysis. The treatment group should be the clinics that Firm A has acquired, and the control group should be a group of separately managed clinics similar in geography, size, ownership, payer mix, patient demographics, and treatment volume. For a discussion of similar analyses, see Farrell, Pautler, and Vita, "Economics at the FTC: Retrospective Merger Analysis with a Focus on Hospitals." For an example of such an analysis, see the public slideshow "Demonstratives for the testimony of

Professor David Dranove" from *FTC & State of Idaho v. St. Luke's Health System & Saltzer Medical Group* in 2013.

To conduct this analysis, the expert would need:

(1) A comprehensive list of the clinics acquired by Firm A and biographical details about those clinics (location, acquisition date, previous owner, etc.)
(2) Cost and efficiency measures for those clinics (labor cost per treatment, drug and supply acquisition costs, staffing levels and mix, administrative overhead, procurement costs, total cost of care, Medicare reimbursement per treatment, etc.)
(3) Quality and patient outcome measures for those clinics (hospitalization rates, mortality, transplant waitlisting, transplant receipt, infection rates, staffing levels and skill mix, etc.)
(4) Items 1-3 for the control group of similar clinics not acquired or managed by Firm A. These data should cover the same time period as that in items 1-3. Section B of this appendix discusses how these data might be obtained.

The expert should recognize that not all cost savings represent cognizable efficiencies. For example, if the clinic profits by replacing highly educated nurses with less-credentialed technicians, this development plausibly represents a decrease in quality, not just in cost. In general, cost savings can only potentially be cognized as efficiencies if they cannot be linked to a degradation in quality. The expert should communicate closely with counsel when analyzing efficiencies, as the legal criteria for efficiencies is idiosyncratic.

B. Data

Most of the analyses reported above—both in the body of the template and in this appendix—only require commercial data from Firm A and B. These data can be obtained through discovery. The expert should communicate early and often with counsel to identify precisely which data are necessary for the analyses they plan to run.

Other data—for example, that on clinics not managed by Firm A or B—cannot be obtained through normal discovery. Counsel may be able to obtain these data through third-party subpoenas. But the Center for Medicare & Medicaid Services (CMS) also maintains a rich dataset covering all Medicare-certified dialysis facilities, given its role as the primary payor in outpatient dialysis markets. For a particular clinic, the public CMS data provide biographical data, quality measures, and cost and efficiency reports. These data may be sufficient for an expert to undertake all of the quantitative analyses mentioned in the template and appendix.