Comments on the January 2020 Vertical Merger Guidelines and the Healthcare Sector

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I. Introduction

1. With the Draft Vertical Merger Guidelines ("Guidelines") released on January 10, 2020, the DOJ and FTC (collectively "the Agencies") offered long-awaited and expanded guidance on an important, but narrowly defined, set of business combinations. The Guidelines illustrate how competitive harm and pro-competitive benefits may occur from mergers between firms "at different stages of the same supply chain." The examples focus on traditional industrial relationships such as input suppliers and manufacturers, or manufacturers and distributors. They add substantial value and insight into how to consider these types of business combinations.

2. The Guidelines do not, however, directly address healthcare markets.[2] Guidance from the Agencies on how they view vertical and other non-horizontal mergers in healthcare would be particularly helpful given the importance of healthcare to the economy and the empirical significance of non-horizontal healthcare consolidation. Moreover, healthcare encompasses key complicating features that distinguish them from the settings examined in the Guidelines and complicate their analysis:

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[2] The guidelines do include in Example 5, an illustration of foreclosure and raising rivals' costs based on a hypothetical acquisition by a pharmaceutical company of the sole supplier of an active ingredient to one of its products.

- **Moral Hazard**: Patients with health insurance do not typically bear the full marginal cost of the healthcare services they receive. Insurance adds protection against financial risk, which creates value. However, it may also lead patients to consume healthcare with low or no marginal value.
- **Information Asymmetry**: Patients have limited information on the price and value of different treatments and may rely on guidance from medical professionals, who are generally not the payers.
- **Complex Reimbursement Schemes**: Provider payment schemes increasingly employ complex mechanisms to ensure quality *and* control costs, including: (i) bundled payments; (ii) rebates based on cost savings achieved (e.g., Medicare Shared Savings Accountable Care Organization, "ACOs"); and (iii) higher reimbursements conditioned on meeting quality metrics (e.g., Medicare Merit-based Incentive Payments, "MIPS" payments).[3]
- **Price Negotiations and Two-Stage Competition**: Competition between healthcare providers takes place in two stages. In the first stage, providers compete to be included in insurer networks and, for private payers, negotiate reimbursement rates. In the second stage, providers compete for patients given their network status. Price setting differs from simpler traditional models, where sellers unilaterally set prices given a residual demand curve (i.e., Bertrand competition).

3. These specific features of healthcare markets complicate the analysis of vertical and related mergers in healthcare. For instance, moral hazard may allow providers to over-prescribe care. This potential may be alleviated by a provider and insurer merger that allows the provider to share in cost savings. Information asymmetries and patients' reliance on provider referrals may allow a merger between provider types—for example the acquisition of a physician group by a hospital system—to foreclose competition by directing patients away from competitors (e.g., other hospitals), but also creates the possibility for improved patient care if referrals within the merged entity allow for better continuity of care and less duplication of services. Healthcare mergers that, for instance, enable the merged entity more frequently to take payment based on value instead of volume of services, may increase incentives for cost-savings and efficiencies. Finally, understanding whether mergers have pro-competitive benefits often requires assessing

[3] Tim Doran et al., "Impact of Provider Incentives on Quality and Value of Health Care," *Annual Review of Public Health*, 38, 2017, pp. 449–465, available at https://www.annualreviews.org/doi/pdf/10.1146/annurev-publhealth-032315-021457, accessed on February 18, 2020 ("ACOs consist of physician groups, hospitals, and other health care providers that collectively agree to be accountable for the quality and spending for their patient population… Beginning in 2019, all clinicians who bill Medicare (e.g., physicians and nurse practitioners) must participate in either the alternative payment model (APM) or the merit-based incentive payment system (MIPS), both of which are value-based payment models. Bundled payment models and the Pioneer ACO model are examples of advanced APMs."). *See also* Matthew Press et al., "Medicare's New Bundled Payments: Design, Strategy, and Evolution," *Journal of the American Medical Association*, 315(2), 2016, pp. 131–132.

their competitive impact through the lens of a bargaining model and the two stages of competition. By not offering examples in markets with these features, the current Guidelines offer a limited understanding of how the agencies would evaluate the competitive effects of vertical and related mergers in the healthcare sector.

4. This comment illustrates the importance of these features in the context of healthcare markets. We first present several recent healthcare transactions that illustrate the above complicating features. We then propose two potential expansions of the Guidelines relevant to healthcare:

- We propose that the Guidelines recognize their applicability to mergers of complements broadly. We demonstrate that the Guidelines' analyses of foreclosure, raising rivals' costs, and elimination of double marginalization can be extended to analyses of these mergers.
- We propose that the Guidelines further recognize the scope and range of both potential efficiencies and potential anticompetitive inefficiencies likely to be relevant for healthcare mergers.

We conclude with specific recommendations on how further guidance would be helpful for healthcare transactions.

5. While the focus of this comment is on the healthcare sector, our recommendations may be applicable to many sectors outside healthcare with similar characteristics. For instance, telecommunication markets include a first stage of competition with negotiation over a network of providers and prices;[4] insurance markets generally create opportunities for moral hazard; and financial services markets include informational asymmetries and consumer reliance on expert recommendations.

[4] Gregory S. Crawford et al., "The Welfare Effects of Vertical Integration in Multichannel Television Markets" *Econometrica*, 86(3), 2018, pp. 891–954 ("We assume that in each period t (a year in our empirical work), decisions are made according to the following timing: in stage 1, channels and distributors bargain bilaterally to decide affiliate fees, and distributors set prices and make carriage decisions for each market in which they operate; in stage 2, households choose which MVPD, if any, to subscribe to in their market; and in stage 3, households view television channels.").

II. Healthcare Mergers Show the Importance of Key Complicating Features in Healthcare

6. Many recent proposed healthcare mergers have offered the potential for higher quality, cost-efficient care but also have drawn scrutiny from regulators, competitors, and amicus groups. The above complicating features are prominent in these transactions:

A. Cigna/Express Scripts and Aetna/CVS

7. Two recent transactions involve the mergers of health insurers with pharmacy benefit managers (PBMs): the 2018 merger of Cigna and Express Scripts and the 2019 merger of Aetna and CVS. In both cases, amicus groups argued that these transactions would result in important anticompetitive vertical issues.[5] The American Medical Association contended that the CVS-Aetna merger could foreclose retail pharmacy competition by requiring its enrollees to use CVS pharmacies.[6] However, Aetna's incentive to do so is not clear, since precluding the use of other retail pharmacies could push patients to other insurers. Conversely, a merged Aetna/CVS would have a greater incentive promote preventive care, for example by simplifying and marketing the availability of flu shots at CVS's in-store clinics, which may benefit patients and lower its overall costs.

8. Observers also expressed concerns that the merged parties would have an incentive to raise the costs, or diminish the quality, of their PBM services to other insurers. But the parties would only have this incentive if the gains in medical insurance profits outweighed the losses from diminishing the attractiveness of their PBM services. Moreover, integration could allow for better information sharing which could then be used to improve formularies and design stronger incentives to encourage medication compliance. Researchers have also found that insurers offering plans that combined medical and pharmaceutical plans (similar to the merged entity)

[5] The American Antitrust Institute raised objections to both mergers in a letter to Assistant Attorney General Delrahim pursuant to the Tunney Act. *See* Letter from Diana L. Moss (American Antitrust Institute) to Peter Mucchetti (Department of Justice), "Re: *United States v. CVS Health Corp., No. 1:18-cv-02340, Comments of the American Antitrust Institute,"* December 17, 2018. The American Medical Association also sent a Tunney Act comment to AAG Delrahim, focused mainly on the CVS-Aetna merger. *See* Letter from James L. Madara, MD (American Medical Association) to The Honorable Makan Delrahim (Department of Justice), "RE: The Acquisition of Aetna, Inc. by CVS Health Corporation," August 7, 2018.

[6] Letter from James L. Madara, MD (American Medical Association) to The Honorable Makan Delrahim (Department of Justice), "RE: The Acquisition of Aetna, Inc. by CVS Health Corporation," August 7, 2018.

provided more generous coverage of drug therapies that reduce future medical expenditures than insurers offering plans that covered pharmaceutical benefits alone.[7]

B. Saltzer Medical Group/St. Luke's Health System

9. Multiple plaintiffs challenged the acquisition of Saltzer Medical Group by St. Luke's Health on both horizontal and vertical grounds. On the vertical dimension, one plaintiff alleged that the merged entity would be able to redirect patients to St. Luke's hospitals, making it difficult for other hospitals to compete.[8]

10. Such behavior could potentially harm consumers if competing facilities were driven out of business or if post-merger steering led to suboptimal treatment decisions. However, St. Luke's argued that the acquired practices would be better able to coordinate complex care with the hospital system through the integration of electronic health records,[9] and that the combined system could more effectively use risk-based contracts to promote quality, illustrating that changing referral patterns might create and reflect quality and efficiency benefits.[10]

C. UnitedHealth Group/DaVita Medical Group

11. The FTC's and Colorado State Attorney General's reviews of UnitedHealth Group's 2017 purchase of DaVita Medical Group (DMG) both raised vertical concerns. The Colorado Attorney General claimed that UnitedHealth could foreclose rival insurers by keeping both the existing UnitedHealth physician groups *and* DMG physicians from joining networks for competing Medicare Advantage plans.[11] The FTC similarly complained that the proposed acquisition would likely reduce competition in the markets for physician services sold to

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[7] Amanda Starc and Robert Town, "Externalities and Benefit Design in Health Insurance," *NBER Working Paper,* 21783, 2018 ("MA-PD plans offer more generous prescription drug plans than their stand-alone counterparts; this increased generosity is concentrated in those drug categories with large offsets. Our model of firm behavior highlights the mechanisms that drive this differential: MA-PD plans have an incentive to internalize the effect of medical care offsets.").

[8] Answering Brief of Saint Alphonsus Medical Center-Nampa et al., *Saint Alphonsus Medical Center-Nampa, Inc. et al. and Idaho Statesman Publishing, LLC et al. v. St. Luke's Health System, Ltd. et al.*, July 16, 2014.

[9] For example, McCullough et al. (2016) show that adoption of health information technology can improve outcomes for patients who require significant care coordination. *See* Jeffrey McCullough et al., "Health Information Technology and Patient Outcomes: The Role of Information and Labor Coordination," *RAND Journal of Economics*, 47(1), 2016, pp. 207–236 ("Health IT does improve outcomes for patients with complex, high-severity diagnoses.").

[10] Findings of Fact and Conclusions of Law, *Saint Alphonsus Medical Center - Nampa, Inc., et al. v. St. Luke's Health System* and *FTC and State of Idaho v. St. Luke's Health System*, *Ltd.; Saltzer Medical Group, P.A.*, January 24, 2014.

[11] Complaint, *State of Colorado, ex rel. Philip J. Weiser, Attorney General v. UnitedHealth Group Incorporated and DaVita Inc.*, June 19, 2019.

Medicare Advantage plans, thereby reducing competition for Medicare Advantage plans sold to individual enrollees.[12] In areas where sufficient independent provider groups remained, the threat of foreclosure would be less likely and an exclusive insurer-provider relationship could add efficiency. The merger ultimately proceeded with the FTC requiring divestiture of the DMG provider group in the Las Vegas area to Intermountain Healthcare—itself an integrated provider and insurer—and the Colorado AG agreeing to conduct remedies.[13]

D. Partners Healthcare/South Shore Hospital and Harbor Medical Associates

12. In Partners Healthcare's attempted 2013 acquisition of South Shore Hospital and Harbor Medical Associates, the Massachusetts Health Policy Commission raised concerns over changes in physician referral patterns, noting that they would likely raise increase costs by increasing use of the Partners and South Shore facilities, which the Health Policy Commission claimed had relatively high prices.[14] Partners countered that the acquisition would reduce costs because it could steer patients to lower-cost hospitals within the Partners network—also assuming patients' reliance on medical professionals' guidance.

E. Cabell Huntington Hospital/St. Mary's Medical Center

13. The FTC challenged the merger of Cabell and St. Mary's hospitals in Huntington, WV, because the hospitals offered many similar inpatient and outpatient services.[15] However, because each hospital specialized in a different set of services (Cabell in neonatal and obstetrical care; St. Mary's in complex cardiac care), state regulatory agencies found significant complementarities that would imply that the merger may lead to lower prices.[16] These services are not clinical complements, but they generated complementarities for insurers building a network.

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[12] Bruce Japsen, "UnitedHealth Group Wins FTC Approval of DaVita Deal On Divestiture Conditions," *Forbes*, June 19, 2019, available at https://www.forbes.com/sites/brucejapsen/2019/06/19/unitedhealth-group-wins-ftc-approval-of-davita-deal/#858a15b6e403, accessed on February 18, 2020."

[13] Bruce Japsen, "UnitedHealth Group Wins FTC Approval Of DaVita Deal On Divestiture Conditions," *Forbes*, June 19, 2019, available at https://www.forbes.com/sites/brucejapsen/2019/06/19/unitedhealth-group-wins-ftc-approval-of-davita-deal/#858a15b6e403, accessed on February 18, 2020; Consent Judgement, *State of Colorado, ex rel. Philip J. Weiser, Attorney General v. UnitedHealth Group Incorporated and DaVita Inc.*, June 18, 2019."

[14] Commonwealth of Massachusetts Health Policy Commission, "Review of Partners HealthCare System's Proposed Acquisition of South Shore Hospital (HPC-CMIR-2013-1) and Harbor Medical Associates (HPC-CMIR-2013-2) Final Report," February 19, 2014.

[15] Federal Trade Commission, "FTC Challenges Proposed Merger of Two West Virginia Hospitals," *FTC.gov,* November 6, 2015, available at https://www.ftc.gov/news-events/press-releases/2015/11/ftc-challenges-proposed-merger-two-west-virginia-hospitals, accessed on February 18, 2020.

[16] Decision, *In Re: Cabell Huntington Hospital, Inc. Before the West Virginia Health Care Authority*, June 22, 2016.

III. Recommendation 1: Guidelines May Want to Consider Mergers of Complements and Not Just Vertical Mergers

14. The Guidelines offer expanded guidance on "vertical" mergers, but appear to leave out a range of business combinations that could be analyzed under a similar framework. A strict reading of the Guidelines would seem to exclude major merger activity in the healthcare sector, including the formation of multi-specialty physician groups, mergers of hospitals with physician groups, acquisitions of outpatient or long-term care facilities by hospital systems, and mergers of insurers and healthcare providers. Indeed, most of the examples discussed in Section II included concerns that the merged entity could harm competition not by imposing vertical restraints along a supply chain, but by refusing to join competing insurers' provider networks (UnitedHealth Group/DMG) or by cutting off patient referrals to competing providers (Aetna/CVS, Saltzer/St. Luke's, and Partners/South Shore).

15. We recommend that the Guidelines explicitly broaden their guidance to consider mergers between complementary products. This broader group shares two important commonalities with vertical mergers as defined in the Guidelines. First, mergers of complements do not lead to a presumptive loss of competitive alternatives. Any loss of competition from a merger of complements would need to occur through indirect means such as foreclosure. Second, mergers between complements generally lead to economic efficiencies through the elimination of double marginalization and reduction of frictions (e.g., contracting or hold-up costs).

16. Below, we demonstrate how the Guidelines' analyses of the effects of vertical mergers would apply to mergers of complements in the healthcare sector.

A. Foreclosure and Raising Rivals' Costs

17. The Guidelines offer examples in which a vertical merger may diminish competition for a relevant product (i.e., one where the potential for harm is being evaluated) by denying competing firms or potential entrants access to a necessary input, charging competitors more for an input, or raising the cost of distribution to competitors. In healthcare markets, similar concerns may arise from providers' and insurers' ability to direct patients through referrals, and network and plan design.

18. Clinical relationships could enable providers to foreclose competitors or raise rivals' costs (paralleling suppliers' or distributors' ability to impose supply chain restraints). For example, hospitals can influence physicians' patient volumes by choosing practice groups for hospital-based services and setting admitting privileges; community hospitals can influence patient volume at tertiary care hospitals; and physicians can influence patient flow through referrals to other physicians and medical facilities.[17] This power over referrals led to the concerns over foreclosure in the St. Luke's case and steering to high-cost providers in the Partners case. Economists have long raised the concern that physician groups that own ambulatory surgery centers, specialty hospitals, or other facility types, may raise rivals' costs by selectively referring the most profitable patients to their affiliated facility.[18]

19. Insurers and providers may also be able to foreclose competition or raise rivals' costs through negotiations over network inclusion. The provider in an integrated insurer and provider group could refuse to participate in other insurers' plans, similar to the concern expressed by the FTC and the Colorado AG that a combined UnitedHealth Group/DMG would not allow participation of its medical groups in competing Medicare Advantage plans. Alternately, the insurer in the same integrated entity could refuse to include other providers in their network or could increase patient cost-sharing for these providers. This is similar to concerns discussed above that post-merger Aetna would drive patients to CVS retail pharmacies.

20. The potential for foreclosure or raising rivals' costs does not necessarily indicate that foreclosure is likely. As with purely vertical mergers, the probability of foreclosure will depend, at least in part, on whether the combined entity would have an *incentive* to foreclose competition. Consider a merger between an entity with both an insurance product and a set of outpatient clinics. Even if the insurer could require that all its enrollees seek primary care at its own clinics, it may not have an incentive to engage in this behavior if the increased profitability at its clinics is more than offset by losses in the sales of the insurance product to enrollees who do not want

[17] Kristin Hambelton, "Cultivating Relationships with Physicians that will Increase Referrals," *Becker's Hospital Review*, July 27, 2015, available at https://www.beckershospitalreview.com/hospital-physician-relationships/cultivating-relationships-with-physicians-that-will-increase-referrals.html, accessed on February 18, 2020 ("Cultivating relationships with physicians, with the goal of earning valuable referrals, starts with the obvious – providing the best quality care for patients. From that baseline, healthcare organizations should develop strategies to build relationships and expand an organization's reach.").

[18] Jason Barro et al., "The Effects of Cardiac Specialty Hospitals on the Cost and Quality of Medical Care," *Journal of Health Economics*, 25, 2006, pp. 702–721 ("for-profit hospitals concentrate on providing profitable procedures and attracting relatively healthy patients, leaving (predominantly nonprofit) general hospitals with a less-remunerative, sicker patient population.").

such a restrictive product. Similarly, following a merger between a hospital and a physician group, the physician group may refuse to admit patients to unaffiliated hospitals, but could lose patients who prefer specific facilities.

21. While vertical mergers or mergers between complements may allow some entities to foreclose competition or raise rivals' costs, efforts to control costs often rely on providers to manage utilization and combat moral hazard. For these reasons, similar changes to referral patterns or provider networks to ones that raise concerns over foreclosure may in some cases be procompetitive changes that improve the quality and cost-efficiency of patient care.

B. Elimination of Double Marginalization and Changes in Bargaining Leverage

22. Mergers between providers of complementary products (beyond just vertical mergers along a supply chain) can lead to price reductions.[19] The intuition set forth in the Guidelines is that a downstream merging firm would take into account the "benefit to the upstream firm from setting a lower downstream price and making higher sales." This result is called the elimination of double marginalization. A similar price decline is expected from the merger of complementary providers when prices are determined through negotiations, as is common in healthcare markets.[20]

23. In a bargaining context, mergers of complements in an insurer network generate price declines because the post-merger entity has *less* bargaining leverage than each entity would have when bargaining separately. Imagine, for example, a plan that would have limited marketability without either of two entities: the local pediatric hospital and the local skilled nursing facility. Each provider, when negotiating separately, can be thought of as completing the network. Post-merger, the combined entity may threaten to exit from the insurer network, but cannot threaten to remove the incremental value of completing the pair *twice*—as the two firms can do when

[19] Jean Tirole, The Theory of Industrial Organization 70, 1988 ("the monopoly producers of complementary goods have incentive to integrate (horizontally) in order to avoid double marginalization and an excessive demand contraction."); Matteo Alvisi et al., "Separating Complements: The Effects of Competition and Quality Leadership," *Journal of Economics,* 103(2), 2011, pp. 107–131 ("In fact, when complementary goods are sold by different firms, prices are higher than those set by a monopoly selling all the complementary goods. A merger would then yield a higher consumer surplus.").

[20] Aviv Nevo, "Mergers that Increase Bargaining Leverage: Remarks Prepared for the Stanford Institute for Economic Policy Research and Cornerstone Research Conference on Antitrust in Highly Innovative Industries," January 22, 2014 ("if the [goods are complements] then bargaining separately the providers would get … more than bargaining jointly. This might seem surprising, but it is just the counterpart of two complements merging in a price setting framework.").

negotiating separately. The combined entity will then have less leverage in negotiations with the insurer than the sum of the leverage of the two providers negotiating separately.[21] All else equal, the greater the complementarities—i.e., the more the combined product's value exceeds the sum of each individual product's value to the network—the greater the potential decline in the negotiated price predicted under this model.

24. While mergers of complements are expected to generate price declines, academic research has found that non-horizontal healthcare provider mergers can result in increases in negotiated prices (even absent an increase in share or market power in any single market). Economic models predict that cross-market hospital mergers can lead to higher prices when, rather than being network complements, hospitals are substitutes to the insurer, or providers' bargaining weights increase with system size.[22] Thus, the ultimate effect of a particular merger on bargained prices would depend on the specific bargaining context, the strength of complementarities, and the countervailing bargaining power of the payer they face, among other factors.

IV. Recommendation 2: Guidelines May Want to Consider the Distinct Sources of Efficiencies and Potential Inefficiencies for Mergers of Complements

25. The Guidelines briefly discuss efficiencies, including that "A single firm able to coordinate how [] assets are used may be able to streamline production, inventory management, or distribution, or create innovative products in ways that would have been hard to achieve through arm's length contracts." In healthcare markets, mergers of complements may facilitate firm-specific investment and care coordination, and increase incentives for efficient care. Healthcare researchers have also recognized that mergers of complementary providers could lead to overconsumption of services that are not cost-effective. The net effect of a merger between healthcare complements will be fact-specific, depending on the specific parties, and the

[21] Kathleen Easterbrook et al., "Accounting for Complementarities in Hospital Mergers: Is a Substitute Needed for Current Approaches?" *Antitrust Law Journal*, 82(2), 2019, pp. 497–531.
[22] Matthew Lewis and Kevin Pflum, "Hospital Systems and Bargaining Power: Evidence from Out-of-Market Acquisitions," *RAND Journal of Economics*, 48(3), pp. 579–610; Leemore Dafny et al., "The price effects of cross-market mergers: theory and evidence from the hospital industry," *RAND Journal of Economics*, 50(2), 2019, pp. 286–325.

regulation, bargaining context, and financial incentives they face before and after the merger, among other factors.

26. Insurer-provider integration could also add efficiency. For example, Kaiser Permanente, Geisinger Healthcare, and Intermountain Healthcare, are all integrated insurer-providers, and the tight link has been thought to make it easier for these systems to adopt quality-improving measures.[23]

A. Potential Efficiencies from the Integration of Healthcare Complements

27. Healthcare markets include relationships through which integration between providers could result in better, more efficient, patient care. For example, integration between hospitals and physician groups can foster closer collaboration, improving communication and coordination of care. Integrated healthcare systems may provide higher quality care in terms of clinical effectiveness, length of stay, medication errors, and number of office visits.[24] Integration across different facility types or physician specialties can reduce costs and reduce duplicative testing, and primary care physicians who concentrate their referrals within a smaller set of specialists may achieve lower healthcare costs without a decline in quality.[25]

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[23] Yi Yvonne Zhou et al., "Improved Quality at Kaiser Permanente Through E-Mail Between Physicians and Patients," *Health Affairs,* 29(7), 2010, pp. 1370–1375, available at https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2010.0048, accessed on February 13, 2020; Ronald Paulus et al., "Continuous Innovation in Health Care: Implications of the Geisinger Experience," *Health Affairs*, 27(5), 2008, pp. 1235–1245, available at https://www.healthaffairs.org/doi/full/10.1377/hlthaff.27.5.1235, accessed on February 13, 2020 ("What are the underlying characteristics that facilitate Geisinger's innovation record? Most important are Geisinger's IDS [integrated delivery system] structure and clinical leadership"); Brent C. James et al., "How Intermountain Trimmed Health Care Costs Through Robust Quality Improvement Efforts," *Health Affairs,* 30(6), 2011, available at https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2011.0358, accessed on February 22, 2020.

[24] Wenke Hwang et al., "Effects of Integrated Delivery System on Cost and Quality," *American Journal of Managed Care* 19(5), 2013, pp. e175–e184 ("The vast majority of studies we reviewed have shown that integrated delivery systems have positive effects on quality of care. Few studies linked use of an integrated delivery system to lower health service utilization. Only 1 study reported some small cost savings.").

[25] For example, Baker et al. (2019) demonstrated that multispecialty physician group practices, compared to single specialty practices, "improve[d] care delivery by reducing hospitalizations among relatively sick patients," indicating the potential for integrated multispecialty groups to lower costs. Along the same lines, integration between community hospitals and higher acuity hospitals can reduce duplicative tests and costs for patients that are transferred between facilities: Bledsoe et al. (2017) find the rate of repeated CT scanning, radiology costs, and total costs for day one of hospitalization to be significantly lower for trauma patients transferred from a hospital in the same healthcare network, as compared to patients transferred from hospitals in different networks. *See* Laurence C. Baker et al., "The Effects of Multispecialty Group Practice on Health Care Spending and Use," *NBER Working Paper*, 25915, 2019; Joseph Bledsoe et al., "The Salutary Effect of an Integrated System on the Rate of Repeat CT Scanning in Transferred Trauma Patients: Improved Costs and Efficiencies," *The American Journal of Surgery*, 214, 2017, pp. 198–200 at p. 198. *See also*, Brad Brooks, "Creating an Integrated Healthcare Ecosystem Through Mobile Communication Technology," *Healthcare Financial Management*, August 1, 2018, available at https://www.hfma.org/topics/hfm/2018/august/61402.html, accessed on February 13, 2020; Leila Agha et al., "Team Formation and Performance: Evidence from Healthcare Referral Networks," *NBER Working Paper*, 24338, 2018.

28. However, there are mixed findings on whether hospital/provider integration increases quality and lowers patient expenditures or procedure rates.[26] Thus, the likelihood of actually achieving potential efficiencies would also depend on the specific parties at issue.

29. While some coordination may be possible without mergers, common ownership may allow for additional efficiencies by enabling upfront investment in cost-saving technologies or treatment choices that increase short-term costs but reduce long-run medical expenditures. For instance, large hospital systems may have the scale to create electronic Intensive Care Unit (eICU) support centers (state-of-the-art telemedicine facilities) to improve care at their smaller facilities. Similarly, mergers may enable treatment choices that increase short-term costs and reduce long-run medical expenditures, and that may be difficult to incentivize with contracts.

B. Mergers of Complements in Healthcare Settings May Increase Incentives to Provide Quality and Cost-Efficiency

30. In healthcare markets, a merged entity can have improved incentives for quality and cost-efficiency, offsetting moral hazard and patient incentives to overconsume care. Mergers between different providers could facilitate the combined entity's acceptance of reimbursement structures that incentivize quality and cost-savings. For example, vertically integrated physicians, hospitals, and outpatient facilities may be better positioned to take bundled payments or to accept capitation. An insurer that owns healthcare facilities may combat moral hazard by effectively encouraging preventive care and/or reducing unnecessary care. Similarly, a hospital system with its own insurance product will have an incentive to control total healthcare expenditures.

C. Integration May Increase Concerns of Overprovision of Care

31. In the presence of moral hazard and information asymmetries, it is also possible that a combined entity will increase consumption of healthcare beyond what is necessary or efficient.[27] Because patients depend heavily on the advice of medical professionals to determine a course of treatment, and because they do not face the full cost of additional care, a merger of different

[26] Alison Evans Cuellar and Paul J. Gertler, "Strategic integration of hospitals and physicians," *Journal of Health Economics*, 25(1), 2006, pp. 1–28 ("We examine whether integration lead [*sic*] to efficiency gains from transaction cost economies thereby allowing providers to offer managed care insurance plans lower prices or whether integration is really a strategy to improve bargaining power and thereby increase prices."). *See also* Kristin Madison, "Hospital-Physician Affiliations and Patient Treatments, Expenditures, and Outcomes," *Health Services Research*, 39(2), 2004, pp. 257–278.

[27] Lawrence P. Casalino et al., "Physician self-referral and physician-owned specialty facilities," Research Synthesis Report No. 15, 2008.

provider types may increase the financial incentives for one party to prescribe the services of the other even if their benefits do not outweigh their costs.

32. For many decades, federal regulation has limited such financial incentives through Stark Law and Anti-Kickback Statute on self-referrals—because they could lead to excessive utilization. The economics and health services literature have found mixed results on the effect of physician-hospital integration on utilization.[28]

V. Conclusion

33. As this comment discusses, a consideration of healthcare markets clarifies the need for a more expansive treatment of vertical mergers and of the distinct sources of efficiencies from vertical mergers than is set out in the Guidelines. Providing examples from the healthcare sector would allow the Agencies to offer guidance on how they would respond to a number of additional analytic challenges common in healthcare mergers, but also relevant to other industries.

34. Healthcare examples would be particularly helpful in illuminating how the Agencies evaluate mergers in a bargaining framework. The Guidelines state that an input supplier that has merged with a downstream firm could be willing to "hold out" for higher prices, but does not provide much additional insight on the effect of the bargaining context.[29] Yet, the Agencies do use sophisticated bargaining models in actual merger analyses to quantify theories of vertical harm, such as in the recent AT&T-Time Warner merger.[30] Economic theories delineate specific conditions under which anticompetitive vertical restraints are not only possible, but where the gains from this behavior in the relevant market would outweigh the losses incurred in related product markets.[31] How will the Agencies apply these theories in a bargaining context?

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[28] For example, Koch et al. (2017) find an increase in utilization, while Baker et al. (2014) find a small decrease in inpatient utilization. Thomas Koch et al., "How Vertical Integration Affects the Quantity and Cost of Care for Medicare Beneficiaries," *Journal of Health Economics*, 52, 2017, pp. 19–32 ("our results imply that the increased utilization of acquiring hospitals' outpatient departments by acquired physicians is not wholly offset by reduced utilization by other clinicians."); Laurence Baker et al., "Vertical Integration: Hospital Ownership of Physician Practices is Associated with Higher Prices and Spending," *Health Affairs*, 33, 2014, pp. 756–763 ("our results provide a mixed, although somewhat negative, picture of vertical integration from the perspective of the privately insured.").

[29] Guidelines, Example 5, p. 6.

[30] Expert Report of Carl Shapiro, *US v. AT&T Inc.*, *DirectTV Group Holdings, LLC, and Time Warner Inc.*, February 2, 2018.

[31] *See, for example*, Michael D. Whinston, "Tying, Foreclosure, and Exclusion," *American Economic Review*, 80(4), 1990, pp. 837–859; Jean Tirole, "The analysis of tying cases: A primer," *Competition Policy International*, 1(1), 2005, pp. 1–25.

35. Adding healthcare examples would also illuminate how the Agencies would weigh the likelihood of foreclosure when assessing the net impact of a merger. Consider, for example, an acquisition of an outpatient clinic by a physician group. Such a merger could be anticompetitive if, for example, the physician group diverted patients to its affiliated clinic, which then caused competing clinics to exit. A model of the merger's effect would have to estimate first the changes in optimal referral patterns and the likelihood of foreclosure, then the effect on the exit of competing clinics, and then the ultimate effect on clinic prices. This would also have to be balanced against potential pro-competitive gains from integration. How would the Agencies consider a merger with a small probability of foreclosure, but a significant effect on prices if foreclosure occurs? Or a high likelihood of foreclosure, with a small price effect?

36. Examples of mergers from the healthcare sector could also provide some insight into how the Agencies will evaluate explicit limits on firm behavior. Healthcare markets and entities operating within them are heavily regulated. What weight would the Agencies place on regulatory limits that would constrain the merged entity's behavior? Would they view such limits with the same skepticism as the Agencies have historically viewed behavioral remedies?

37. Examples from healthcare also illustrate that two firms may produce both substitute and complementary products, that the same two products may function more as substitutes in some settings and complements in others, and that the degree of complementarity between products can differ. For example, physicians from different specialties may be substitutes for some patients and complements for others. A children's hospital and a general acute care facility may be complements, but a physician group and a hospital may be stronger complements. What evidence would the Agencies find useful in assessing the strength of complementarities?

38. In summary, the Guidelines recommend applying the "principles and analytical frameworks used to assess horizontal mergers" to the analysis of vertical mergers, but acknowledge that vertical mergers raise "distinct considerations." We agree. We believe that considering mergers of complements and recognizing the distinct sources of efficiencies and potential inefficiencies for these mergers would add insight into the Agencies' analysis of non-horizontal mergers. Applying the Agencies' guidance to healthcare examples would add value and provide insight for industries with similar distinctive features such as moral hazard,

information asymmetries, complex payment schemes, network formation and price setting through bargaining.