RESPONSE

CAN ANTITRUST LAW CURE THE PHARMACY DESERT PROBLEM IN AMERICA?[†]

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[†] An invited response to Christopher Leslie, *Pharmacy Deserts and Antitrust Law*, 104 B.U. L. REV. 1593 (2024).

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INTRODUCTION

America is facing a pharmacy closure epidemic,[1] causing pharmacy deserts: geographic areas where people lack access to pharmacies.[2] People living in pharmacy deserts face worse health outcomes than those with adequate access to pharmacies for several reasons. First, when no pharmacies are available in the neighborhood, residents face high barriers to obtaining essential medications.[3] This can affect the health status of people suffering from chronic conditions[4] such as diabetes, HIV/AIDS, cancer and cardiovascular diseases, especially if they lack the ability, the time, and the necessary resources to travel long distances to reach the nearest pharmacy.[5]

Second, access to pharmacies facilitates access to vaccines for communities.[6] This can reduce the spread of infectious diseases in neighborhoods including COVID-19. Third, because pharmacists also educate their customers about the importance of vaccination, access to pharmacies can increase the vaccination uptake and improve people's health especially in times of a pandemic.[7] Moreover, pharmacies in America do not only sell medications, but they also

[1] *See* OFF. OF POL'Y PLAN., U.S. FTC, PHARMACY BENEFIT MANAGERS: THE POWERFUL MIDDLEMEN INFLATING DRUG COSTS AND SQUEEZING MAIN STREET PHARMACIES 1 (2024), ("Between 2013 and 2022, about ten percent of independent retail pharmacies in rural America closed.").

[2] Benjamin Y. Urick, Jessica K. Adams & Maimuna R. Bruce, *State Telepharmacy Policies and Pharmacy Deserts*, 6 JAMA NETWORK OPEN 2 (Aug. 14, 2023), https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2808246 ("[P]harmacy desert refers to any geographic area where patients have difficulty obtaining medications.").

[3] Kristine Pisikian, *How Pharmacy Deserts Impact Communities*, GOODRX HEALTH (Mar. 30, 2022), https://www.goodrx.com/hcp-articles/providers/pharmacy-deserts ("[P]atients . . . now have to spend additional time and energy in finding a different pharmacy to get their medications filled in a timely fashion.").

[4] Omolola E. Adepoju et al., *Rethinking Access to Care: A Spatial-Economic Analysis of the Potential Impact of Pharmacy Closures in the United States*, 6 PLOS ONE 2 (July 27, 2023), https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0289284&type=printable ("[Pharmacy] closures may detrimentally affect the health outcomes of acute and chronic disease patients . . . .").

[5] *See* Pisikian, *supra* note 3 (noting greater distance to one's nearest pharmacy is associated with decreased access to healthcare).

[6] *See id.* (arguing pharmacy deserts negatively impact vaccine administration, while noting some Major League Baseball stadiums stepped in as vaccination clinics in urban areas).

[7] George DeMaagd & Ashley Pugh, *Pharmacists' Expanding Role in Immunization Practices*, 2023 U.S. PHARMACIST 34, 35, https://bt.e-ditionsbyfry.com/publication/?m=22400&i=804080&p=52&ver=html5 (describing importance of pharmacists as "qualified providers, advocates, and educators" in immunization accessibility and administration).

offer their customers medical advice and treatment.[8] For instance, "CVS Health operates roughly 1,100 MinuteClinics in some of its pharmacies."[9] These MinuteClinics are walk-in clinics that treat minor health conditions and perform health screenings at a lower cost than hospitals.[10] For these reasons, pharmacy deserts aggravate the rising health disparities in America.

However, pharmacy closures and the resulting pharmacy deserts do not only widen health inequities, but also racial inequities across the nation. Between 2007-2015, Black and Hispanic/Latino neighborhoods had fewer pharmacies than their White counterparts.[11] In 2015 pharmacy deserts in America were predominately located in Black or Hispanic/Latino neighborhoods.[12] Data also show that Black and Hispanic/Latino neighborhoods face higher odds of experiencing a pharmacy closure compared to White neighborhoods.[13] Because residents living in those neighborhoods must travel several miles to reach a pharmacy and obtain their medications, they are more likely to stop adhering to their treatment leading to devastating outcomes for their well-being and health.[14] Indeed, research indicates that "individuals living in pharmacy deserts experience higher rates of hospitalizations and lower life expectancy."[15]

The COVID-19 pandemic illustrated the important role pharmacies play in improving populations' health. For instance, in the years between 2020-2022, pharmacists in America conducted more than 42 million COVID-19 tests and provided more than 270 million vaccinations.[16] Pharmacists also prescribed and

[8] *See* Adepoju et al., *supra* note 4, at 1-2 ("Patient counseling provided by pharmacists significantly improves compliance with treatment, which, in turn, can reduce overall healthcare costs.").

[9] LAWTON ROBERT BURNS, LIMITS ON CONSUMER BENEFITS FROM PROPOSED MERGER OF AETNA INC. INTO CVS HEALTH CORPORATION 8 (2018), https://www.ama-assn.org/system/files/2019-01/cvs-aetna-merger-exhibit-reports.pdf [https://perma.cc/R3Y8-UMBK].

[10] Theodosia Stavroulaki, *Mergers that Harm Our Health*, 19 BERKELEY BUS. L.J. 89, 113-14 (2022) (citing BURNS, *supra* note 9, at 8-9, 24).

[11] *See, e.g.*, Jenny S. Guadamuz et al., *Fewer Pharmacies in Black and Hispanic/Latino Neighborhoods Compared with White or Diverse Neighborhoods, 2007-15*, 40 HEALTH AFFS. 802, 807 (2021).

[12] *Id.* at 802.

[13] *Id.* at 803 (noting pharmacy closures in "Black and Hispanic/Latino neighborhoods . . . . worsened during the COVID-19 pandemic").

[14] *Id.* (arguing due to pharmacy closures, "residents of Black and Hispanic/Latino neighborhoods, who already have lower rates of medication adherence, need to travel even farther to their nearest pharmacy to obtain their prescription medications" (footnote omitted)).

[15] *Pharmacy Deserts: A Growing Concern in Rural America*, E. ST. PHARMACY, https://eaststreetpharmacy.com/pharmacy-deserts-a-growing-concern-in-rural-america.html [https://perma.cc/78GM-VTG2] (last visited Sept. 29, 2024).

[16] John D. Grabenstein, *Essential Services: Quantifying the Contributions of America's Pharmacists in COVID-19 Clinical Interventions*, 62 J. AM. PHARMACISTS ASS'N 1929, 1929 (2022) ("[P]harmacists and their teammates conducted >42 million COVID-19 tests, provided

dispensed numerous antibody products and antiviral medications.[17] Due to pharmacists' pandemic interventions, millions of deaths and hospitalizations were prevented.[18] This secured a $450 billion savings in health care spending.[19] The fact that, as noted, most pharmacy deserts are primarily located in Black and Latino neighborhoods, may at least partially explain the higher mortality rates that Black and Latino populations experienced during the pandemic.[20]

I. CAUSES AND PROPOSED SOLUTIONS

But what causes this pharmacy closure epidemic that harms vulnerable populations in America? Several factors contribute to the pharmacy closure crisis that is hitting the nation. For instance, pharmacies that are located in lower-income communities must necessarily serve a higher proportion of the population that relies on Medicaid to obtain coverage. However, the reimbursement rates that pharmacies receive when serving Medicaid patients are much lower than the ones they receive when they treat privately insured patients.[21] As a result, pharmacies located in lower income neighborhoods, which consist primarily of Black and Latino residents, often fail to improve their profit margins and remain afloat.[22] Rural communities in America are also characterized by lower population density. Since pharmacies in rural areas

>270 million vaccinations (including 8.1 million COVID-19 vaccinations for long-term care residents) within community pharmacy programs alone.").

[17] *Id.* at 1939 (noting pharmacists provided education and administration services for antibody products and antiviral medications).

[18] *Id.* (reporting estimated health care cost savings and avoided hospitalizations due to pandemic interventions by pharmacists).

[19] *Id.* at 1929.

[20] *See* Noelle Kwan, *The Impact of Pharmacy Deserts*, 2014 U.S. PHARMACIST 32, 32, https://bt.e-ditionsbyfry.com/publication/?m=22400&i=819035&p=46&ver=html5 [https://perma.cc/GP9P-8A6G] ("Medications are widely used and important in preventing morbidity and mortality for a variety of medical conditions."); *see also* Latoya Hill & Samantha Artiga, *COVID-19 Cases and Deaths by Race/Ethnicity: Current Data and Changes over Time*, KFF (Aug. 22, 2022), https://www.kff.org/racial-equity-and-health-policy/issue-brief/covid-19-cases-and-deaths-by-race-ethnicity-current-data-and-changes-over-time [https://perma.cc/QX8D-8JF5] (indicating non-White populations are disproportionately negatively affected by COVID-19).

[21] Anika Nayak, *How Pharmacy Deserts Are Putting the Health of Black and Latino Americans at Risk*, STAT (Nov. 10, 2023), https://www.statnews.com/2023/11/10/cvs-rite-aid-walgreens-pharmacy-deserts/ [https://perma.cc/28PM-R9QW] ("[P]harmacies at higher risk of being closed are those with a large customer base on public insurance like Medicare and Medicaid, which have lower reimbursement rates than private health plans.").

[22] *See* Maia Anderson, *How Pharmacy Deserts Are Formed*, HEALTHCARE BREW (Mar. 15, 2023), https://www.healthcare-brew.com/stories/2023/03/15/how-pharmacy-deserts-are-formed [https://perma.cc/489D-5Q9W] ("A disproportionate share of Medicaid enrollees are Black or Hispanic/Latino, so pharmacies in predominantly Black and/or Hispanic/Latino neighborhoods are more likely to face [low] reimbursement challenges.").

struggle to achieve the sales volumes necessary to remain profitable, they often close their doors, creating a pharmacy desert.[23] Regulatory barriers can also create pharmacy deserts. For instance, acquiring and maintaining a pharmacy license requires a significant investment.[24] This can be a barrier to entry especially in rural areas which are often deprived of resources and the necessary infrastructure.[25]

Despite the magnitude of the pharmacy desert problem and the severe harm they pose, public health experts claim that the promotion of specific policy solutions, such as increased use of telemedicine and mail-order pharmacies, may reduce the racial and health inequities caused by pharmacy deserts in America.[26] Nonetheless, as Professor Christopher Leslie shows in his innovative piece *Pharmacy Deserts and Antitrust Law*, these solutions may fail to improve access to medications for underserved populations. For example, mail-order pharmacies ensure delivery of medications directly to patients' homes.[27] Hence, mail-order pharmacies can increase accessibility to vital medications and improve the medication adherence rates for underserved communities. Medication delivery combined with the accessibility of virtual appointments with physicians allows patients to obtain care and receive their prescriptions without having to travel long distances.[28]

However, the notion that increased use of telemedicine and mail order pharmacies may mitigate the harm pharmacy deserts cause to vulnerable populations should not remain unchallenged. In fact, access to telemedicine has not spread equally to all populations across America. Indeed, the most vulnerable populations—specifically, racial and ethnic minorities, as well as the elderly, low income, and those less proficient in English—did not rely on telemedicine to receive care during the coronavirus pandemic.[29]

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[23] *Pharmacy Deserts: A Growing Concern in Rural America*, *supra* note 15 (arguing that rural pharmacies need ongoing support and innovation to overcome financial constraints).

[24] *See id.* ("Compliance with federal and state regulations requires significant investment in terms of time and money, which can be prohibitive for small, independent pharmacies.").

[25] *Id.* ("The process of obtaining and maintaining a pharmacy license can be particularly challenging in rural areas due to the lack of resources and support infrastructure.").

[26] *See id.*

[27] *Id.* (observing that medication delivery "is particularly valuable in areas where local pharmacies are scarce or non-existent").

[28] *Id.* ("Telemedicine allows patients to access healthcare from their homes, reducing travel time and costs.").

[29] Kanza Aziz et al., *Association of Patient Characteristics with Delivery of Ophthalmic Telemedicine During the COVID-19 Pandemic*, 139 JAMA OPHTHALMOLOGY 1174, 1180 (2021) ("Outreach to vulnerable populations is important because they may have increased difficulty accessing both in-person and virtual care during [a pandemic-related] crisis."); Jorge A. Rodriguez, Altaf Saadi, Lee H. Schwamm, David W. Bates & Lipika Samal, *Disparities in Telehealth Use Among California Patients with Limited English Proficiency*, 40 HEALTH AFFS. 487, 490 (2021) (finding from sample study that "patients with limited English proficiency had half the odds of using telehealth services compared with English-

The reasons may be rather obvious. Telemedicine requires patients to use unfamiliar technology and have access to reliable broadband internet. These limitations restrict the use of telemedicine by lower income communities, racial and ethnic minorities, and older populations who often lack adequate internet access or digital literacy.[30] For instance, "among adults aged 65 or older, only 53% own a smartphone, 59% have broadband access, and 73% use the Internet."[31] Among the 73% who use the internet, only 60% know how to find a website and send an email.[32] Furthermore, one in eight Americans live in deep poverty, and lower income individuals are less likely to own a smartphone or have a reliable cellphone data plan.[33] Privacy concerns may also deter patients from relying on telemedicine to obtain care.[34] This may be especially true for communities of color[35] due to the deep-rooted racism they have historically experienced, and continue to experience, when they need medical care.[36]

proficient patients"); *see also* Lauren A. Eberly et al., *Patient Characteristics Associated with Telemedicine Access for Primary and Specialty Ambulatory Care During the COVID-19 Pandemic*, 3 JAMA NETWORK OPEN 7 (Dec. 29, 2020), https://jamanetwork.com/journals/jamanetworkopen/articlepdf/2774488/eberly_2020_oi_200981_1613494619.25864.pdf [https://perma.cc/M5EY-9VWK] ("Non-English language as the patient's preferred language was independently associated with 16% lower telemedicine visit completion despite adjustment for other factors, which suggests that language barriers to care via telemedicine platforms may be prohibitive.").

[30] One study found:

> [O]ne in four Americans does not have the [Broadband Internet Access ("BIA")] or devices needed to engage in video visits. Without BIA, patients cannot fully use telehealth in all its forms . . . . Some patients, even those with BIA, have declined to use these technologies because of difficulties with digital literacy or privacy concerns.

Natalie C. Benda, Tiffany C. Veinot, Cynthia J. Sieck & Jessica S. Anker, *Broadband Internet Access Is a Social Determinant of Health!*, 110 AM. J. PUB. HEALTH 1123, 1123 (2020) (footnote omitted).

[31] Jennifer C. Price & Dinee C. Simpson, *Telemedicine and Health Disparities*, 19 CLINICAL LIVER DISEASE 144, 145 (Apr. 2022), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9053673/pdf/CLD-19-144.pdf [https://perma.cc/96UB-LKX5].

[32] Sarah Nouri, Elaine C. Khoong, Courtney R. Lyles & Leah Karliner, *Addressing Equity in Telemedicine for Chronic Disease Management During the Covid-19 Pandemic*, 1 N.E.J. MED. CATALYST 2 (May 4, 2020).

[33] *See id.*

[34] *See generally* Timothy M. Hale & Joseph C. Kvedar, *Privacy and Security Concerns in Telehealth*, 16 AMA J. ETHICS 981 (Dec. 2014), https://journalofethics.ama-assn.org/sites/joedb/files/2018-05/jdsc1-1412.pdf [https://perma.cc/9LVR-AFWJ].

[35] *See* Vivian Yee, Simar S. Bajaj & Fatima C. Stanford, *Paradox of Telemedicine: Building or Neglecting Trust and Equity*, 4 LANCET DIGIT. HEALTH e480, e480 (2022) ("Black Americans have historically adopted novel medical technologies at lower rates than their White counterparts, due in large part to inaccessibility and well founded suspicion towards medical innovation.").

[36] *Id.* at 480; *see also* J. Corey Williams, Opinion, *Black Americans Don't Trust Our Healthcare System—Here's Why*, HILL (Aug. 24, 2017, 11:20 AM), https://thehill.com/blogs/pundits-blog/healthcare/347780-black-americans-dont-have-trust-

Access to medications through mail order pharmacies also suffers from shortcomings. For instance, inadequate packaging or delivery in extremely low or high temperatures can negatively impact the drug's efficacy.[37] Moreover, people who receive their medications through mail order pharmacies often face delays in their delivery which may undermine adherence to their treatment.[38] In addition, mail order pharmacies do not offer the personal advice and treatment local pharmacists in the community do. Local pharmacists offer personalized medical advice to their customers because they are familiar with their health challenges and medical history.[39] Hence, people who rely on mail order pharmacies to get their medications may be deprived of the full range of services local pharmacists can offer.

II. THE ANTITRUST DIMENSION OF PHARMACY DESERTS IN AMERICA

Despite their merits, the above solutions may not address adequately the pharmacy desert problem for yet another reason. Because, as Professor Christopher Leslie argues convincingly, the problem of pharmacy deserts which harms the health of millions of Americans, is also an antitrust problem.[40] This is because the pharmacy closure epidemic that leads to pharmacy deserts is also the result of several vertical and horizontal mergers that increased concentration in the industry.[41]

Indeed, over the past years, several powerful pharmacy chains have acquired their smaller regional competitors, including individual independent pharmacies.[42] After these mergers take place, the acquiring pharmacy chains often shut down the facilities of their acquired competitors leaving a pharmacy

in-our-healthcare-system ("The U.S. medical establishment has a long legacy of discriminating and exploiting black Americans . . . . Historically, medicine has used black bodies, without consent, for its own advancement; while, medical theories, technologies, and institutions were used to reinforce systems of oppression.").

[37] *Mail Order Pharmacies: Understanding the Pros and Cons*, MAXCARE, https://www.maxcarerx.com/mail-order-pharmacies-understanding-the-pros-and-cons/ [https://perma.cc/P49Q-UHDM] (last visited Sept. 29, 2024) ("[I]mproper packaging or exposure to extreme temperatures can affect the drug's efficacy.").

[38] Elizabeth Davis & Joshua Murdock, *What Is a Mail-Order Pharmacy? Here Are 5 Things to Consider*, GOODRX HEALTH, https://www.goodrx.com/drugs/medication-basics/5-things-to-consider-before-using-a-mail-order-pharmacy (last updated Aug. 14, 2024) (discussing potential consequences for ordering medication through mail).

[39] *Mail Order Pharmacies: Understanding the Pros and Cons*, *supra* note 37.

[40] *See generally* Christopher Leslie, *Pharmacy Deserts and Antitrust Law*, 104 B.U. L. REV. 1593 (2024).

[41] *See id.* at 1631-34 (discussing impact of horizontal and vertical mergers on pharmacy benefit manager industry).

[42] *See, e.g.*, *id.* at 1630 (analyzing Rite Aid acquisition of smaller Eckerd and Brooks drugstore chains).

desert.[43] Pharmacy Benefit Managers ("PBM")—firms that act as intermediaries among drug suppliers, pharmacies, and health insurers—have also substantially increased their market power in the relevant market due to a wave of horizontal mergers. Following these mergers the three major PBM players control 85% of the market.[44] Each of these PBMs, however, has also been acquired by a large drug supply chain.[45] Due to this vertical integration, each PBM is motivated to further increase its market power and, hence, its profits, by excluding its rivals, such as the independent pharmacies, from the retail pharmacy market and forcing patients to obtain their medications in the drug supply chain that has acquired the PBM.

Unfortunately, as Professor Leslie shows, PBMs' exclusionary strategy against their smaller rivals in the retail pharmacy sector has been successful. By inflicting "low reimbursement rates, retroactive clawbacks, and predatory audits—all with the purpose and effect of making local pharmacies unprofitable," competition in the retail pharmacy market has been almost eliminated.[46] Due to PBMs' exclusionary practices, independent pharmacies struggle to increase their profits and remain afloat.[47] As a result, they often have no choice but to agree to be acquired by their stronger competitors, the large drug supply chains. Nonetheless, after those mergers are complete, the big drug supply chain shuts down the facility of the independent pharmacy.[48] Sadly, following the closure, a new drug store may not necessarily enter the neighborhood, despite the high demand. This is because when a large drug chain acquires an independent pharmacy, it often integrates into the acquisition contract a covenant not to compete: a clause that deters the seller-independent pharmacy from operating in the neighborhood for several years following the acquisition.[49] This restraint aims to prevent the seller from aggressively

[43] *See id.* at 1630-31 ("M&A activity results in pharmacy closures, which often creates new pharmacy deserts.").

[44] *Id.* at 1632 ("PBMs have now concentrated market power, with the Big Three PBMs controlling 75% to 85% of the PBM market.").

[45] *Id.* at 1633 ("In the 1990s, every major PBM merged with a major drug manufacturer, as Merck, Eli Lilly, and SmithKline Beecham each acquired a PBM and, thus, leverage further down the distribution chain.").

[46] *See id.* at 1601.

[47] *See id.* at 1643 ("By raising their list prices while negotiating a higher discount, the manufacturer receives the same net price, and to show its appreciation, the PBM 'will exclude the company's cheaper competitors or make it harder for patients to get the competitor's medicine.'") (quoting *Ensuring Fairness and Transparency in the Markets of Prescription Drugs: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec. of the Comm. on Com., Sci., & Transp.*, 117th Cong. 36 (2022) (statement of Robin Feldman, Professor of Law, University of California Hastings Law)).

[48] *Id.* at 1629 ("[W]hen large retail pharmacies do acquire local pharmacies, they often close them . . . .").

[49] Matt Marx & Lee Fleming, *Non-Compete Agreements: Barriers to Entry . . . and Exit?*, 12 INNOVATION POL'Y & ECON. 41 (2012), https://www.journals.uchicago.edu

competing against the buyer. But because the buyer often shuts down the facility of the seller-independent pharmacy, these clauses prevent the prior pharmacist from entering the community, even though no pharmacy is available in the neighborhood for years.

This begs the question: *has antitrust law failed to protect vulnerable populations from the harms pharmacy deserts pose?* Raising this question, Professor Leslie argues that the answer should be a positive one. Indeed, in his excellent article, Professor Leslie argues that weak antitrust enforcement in the retail pharmacy and PBM markets has increased consolidation in those markets, which has contributed to the pharmacy closure crisis across the nation.[50]

For instance, in 2007, the FTC allowed a merger between a major drug supply chain (CVS) and Caremark (a large PBM) to move forward, although such a merger would facilitate CVS's efforts to weaken competition in the pharmacy retail market.[51] In addition, in 2015, the FTC approved a merger between CVS and another powerful PBM, Omnicare, although such a merger would allow the merged firm to exclude independent pharmacies.[52] Surprisingly, the FTC also declined to challenge PBMs' anticompetitive practices, and confronted state efforts to regulate the conduct of PBMs.[53] *But why did the enforcers turn a blind eye to these harmful acquisitions?*

Although Professor's Leslie work does not shine a light on this question, one could guess that influenced by the Chicago School's theories, which doubted vertical mergers' anticompetitive effects, the antitrust enforcers were reluctant to oppose mergers between drug suppliers and PBMs.[54] For instance, Chicagoans maintained that unlike horizontal mergers, vertical mergers "should not necessarily be subject to antitrust scrutiny on the basis that an unregulated monopolist can obtain only a single monopoly profit."[55] To Chicagoans, this meant that a monopolist may not necessarily increase its market power as a result of market foreclosure. Chicagoans also pointed to the strong procompetitive benefits vertical mergers tend to create, including the elimination of double marginalization.[56] "Following the merger, therefore, the downstream firm would

/doi/epdf/10.1086/663155 ("A non-compete is an employment contract in which an employee pledges not to work for a competitive firm for a period of time after resigning or being terminated.").

[50] *See* Leslie, *supra* note 40, at 1600-01 (arguing that weak antitrust enforcement contributes to pharmacy desert problem).

[51] *See id.* at 1634 n.306.

[52] *See id.* at 1648 ("In 2015, the FTC, undeterred by the effects [against independent pharmacies] of such vertical consolidation, allowed CVS to purchase another major PBM, Omnicare . . . .").

[53] *See id.* (noting FTC "has actively opposed state efforts to regulate PBMs").

[54] Stavroulaki, *supra* note 10, at 102-03.

[55] *Id.* at 102 (quoting Steven C. Salop, *Invigorating Vertical Merger Enforcement*, 127 YALE L.J. 1962, 1968 (2018)).

[56] *See, e.g.*, Mark Glick & Darren Bush, *The Chicago School, the Post-Chicago School, and the New Brandeisian School of Antitrust: Who Is Right in Light of Modern Economics?*,

reduce rather than increase its output price."[57] In other words, consumers would benefit from vertical integration. Although several of the Chicagoans' theories did not necessarily reflect the complexity of market realities, the courts have relied on them several times to justify their lenient approach to antitrust enforcement.[58] The vertical mergers between PBMs and drug supply chains that the enforcers blessed may be just an additional example.

Professor's Leslie article asks whether more rigorous enforcement of antitrust laws can mitigate the harms pharmacy deserts cause to medically underserved populations.[59] Delving into this question, he makes three main proposals. First, he argues that antitrust enforcers should define geographic markets in a narrower way.[60] For instance, since not all consumers can drive several miles away to reach a pharmacy, each neighborhood should constitute a relevant geographic market and antitrust enforcers should assess any anticompetitive effects, such as reduced access to medical care in that specific market. Second, he argues that enforcers could reduce the harms that vertical mergers among PBMs and retail pharmacies cause to competition in the retail pharmacy sector by seeking divestitures.[61] For example, the FTC could implement its rulemaking authority to prevent retail pharmacies from acquiring PBMs and vice versa. Third, Professor Leslie alleges that enforcers could reduce the risk of pharmacy closures post-merger by negotiating specific merger conditions with the merging entities.[62] For instance, the enforcers would ask the merging parties not to impose the covenants not to compete that prevent pharmacy stores from operating in the medically underserved area, and to not shut down the facilities of the acquired pharmacies for a specific time period.

III. MOVING FORWARD: FOOD FOR THOUGHT FOR FUTURE RESEARCHERS

The above proposed solutions are valuable, and if implemented by antitrust enforcers, they have the potential to alleviate the pharmacy closure crisis and the resulting pharmacy deserts across the nation. Nonetheless, as all solutions do, they raise questions that require further thinking. For example, one could argue that although a segment of consumers—the less wealthy and the less healthy—

30 GEO. MASON L. REV. 935, 944 (2023) ("[V]ertical integration usually involved efficiencies such as the elimination of the double marginalization problem and the elimination of transactions costs from contracting.").

[57] Stavroulaki, *supra* note 10, at 102 (discussing post-Chicago arguments against the Chicagoans' approval of vertical mergers).

[58] *See, e.g.*, Glick & Bush, *supra* note 56, at 944-48.

[59] *See generally* Leslie, *supra* note 40.

[60] *See id.* at 1650 ("Antitrust challenges against major pharmacies should consider anticompetitive effects in local geographic markets.").

[61] *Id.* at 1651 ("Antitrust authorities could address these harms directly by seeking divestitures.").

[62] *Id.* ("[A]ntitrust authorities could negotiate appropriate merger conditions to any such merger.").

cannot afford to travel several miles away to reach a pharmacy and get their medications, another segment of consumers—the wealthier and the healthier—could easily make this drive. *Should the enforcers consider the circumstances of the less fortunate consumers when they define the geographic markets in the context of their merger analysis even if in reality the majority of consumers do make the long drive?* One could also argue that while mergers among pharmacies harm less advantaged consumers because they reduce their access to medications and treatment, they may at the same time create some benefits for the healthier and higher income consumers who are willing to drive several miles to reach the nearest pharmacy. Because the nearest retail pharmacy to a given location serves a wider portion of the population due to closures, it may achieve some economies of scale and even some cost savings (that they may be willing to pass on to their customers). *Should the enforcers prohibit a closure that may reduce access to medications for one group of consumers although it may create some benefits for another?* Finally, a merger condition that prohibits the closure of the acquired retail pharmacy for a specific time period may not necessarily prevent the creation of pharmacy deserts long term, that is, until the specific time period runs out. Building from Professor Leslie's work, it may be worth future research to further explore these questions and concerns.

In brief, Professor Leslie's excellent piece is the first to thoroughly examine the antitrust perspective of pharmacy deserts in America and propose antitrust solutions to the pharmacy closure crisis and the resulting pharmacy deserts. By implementing his proposals, the enforcers may mitigate the harms pharmacy deserts cause to the most vulnerable populations: lower income households and communities of color. They may also mitigate the racially-correlated health disparities that so severely harm America.