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Before the

U.S. Senate Committee on the Judiciary

PBM Power Play: Examining Competition Issues in the Prescription Drug Supply Chain

May 13, 2025

Key Points:

- A substantial portion of what Americans pay for prescription drugs is captured by intermediaries in the distribution system, some of whom neither develop nor directly provide these medications to patients.
- Vertically-integrated pharmacy benefit managers-insurers-pharmacies earn higher profits from their investments compared to the average firm in the S&P 500, suggesting lack of competition in these markets. This trend in vertical integration raises significant antitrust concerns.
- Our study of the insulin market shows that PBMs are doing part of their job—negotiating lower prices from manufacturers—but failing at another crucial aspect: ensuring these savings benefited patients and the healthcare system more broadly.
- The current system of confidential rebates and rising list prices benefits all firms in the pharmaceutical supply chain at the expense of the American patient.
- Increasing price transparency, giving PBMs the fiduciary responsibility to act in the best of interests of health plans and their members, reforming rebates, and addressing antitrust concerns from vertical integration can help make the prescription drug market more competitive and work better for the American patient.

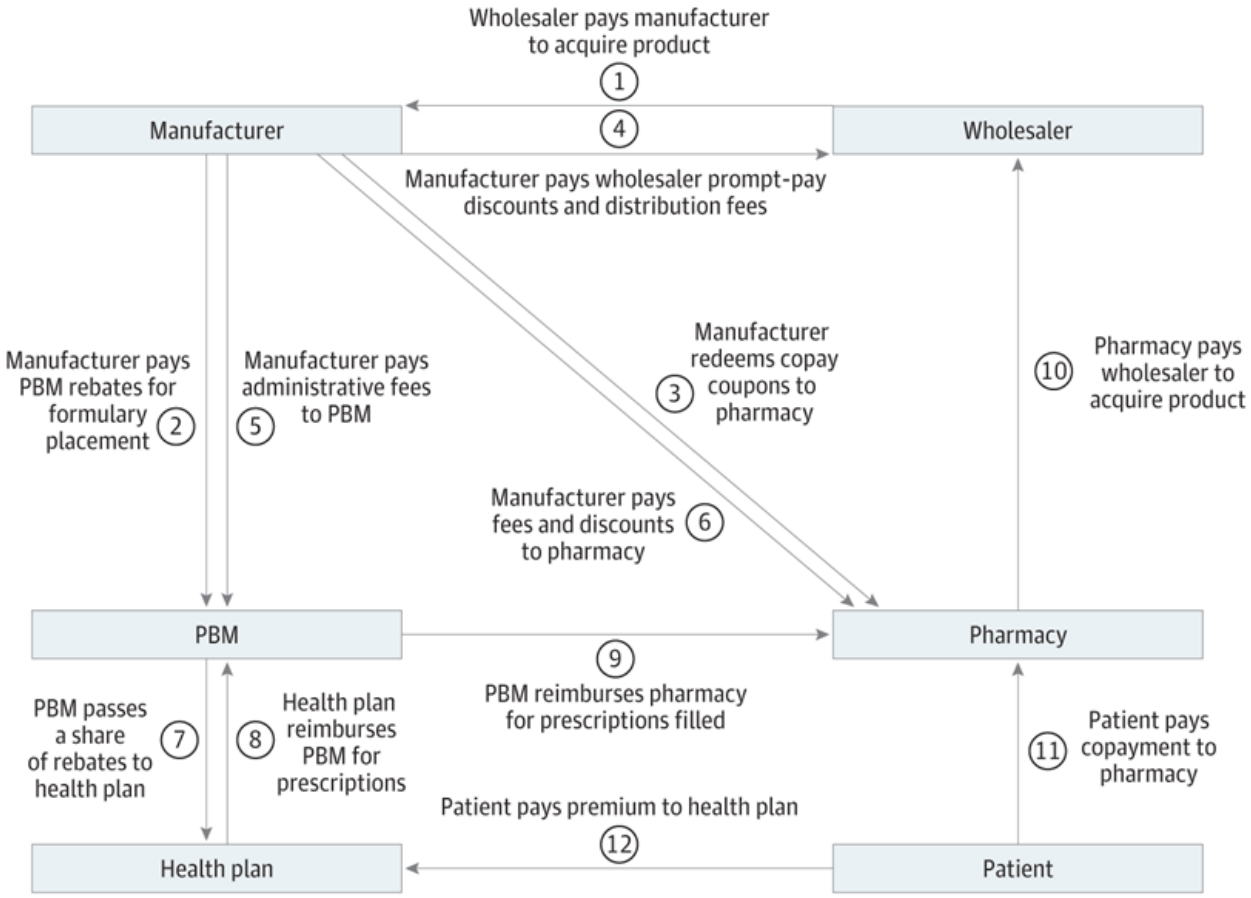
Chairman Grassley, Ranking Member Durbin, and Honorable Members of the Committee, thank you for the opportunity to testify today about competition issues in the prescription drug supply chain, the role of pharmacy benefit managers (PBMs) and the impact on American consumers. My name is Neeraj Sood, and I am a Senior Scholar at the Leonard D. Schaeffer Institute for Public Policy & Government Service and Professor in the schools of public policy, business, medicine and engineering at the University of Southern California. The opinions I offer today are my own and do not represent the views of the University or Institute with which I am affiliated.

For nearly a decade, my colleagues and I have been studying the economics of the prescription drug industry with a particular focus on the behavior of pharmaceutical companies, PBMs and other firms in the pharmaceutical distribution system.[1] Today, I will share key findings from our research that highlight the need to reform the prescription drug market to better serve the needs of Americans struggling with high prescription drug costs. I will also offer suggestions for reforms that can make markets work better for the American patient.

Detailing the Flow of Money Through the Pharmaceutical Supply Chain

Published in 2017, my colleagues and I conducted one of the first comprehensive studies examining how money flows through the pharmaceutical distribution system.

Figure 1: Conceptual Diagram of Money Flows in the Pharmaceutical Distribution System



Original diagram published in USC Schaeffer Center white paper (2017). The above diagram served to update the original and was published in JAMA Health Forum (2021).

[1] All USC Schaeffer Center research on PBMs can be accessed here: https://schaeffer.usc.edu/pbms/

Our research revealed that more than 40 percent of prescription drug spending does not go to manufacturers who research, develop and produce these medications, but instead flows to intermediaries in the supply chain—wholesalers, pharmacies, insurers and PBMs.[2]

This finding was striking because it challenged the conventional narrative that manufacturers were solely responsible for high prescription drug costs. Our research showed that a substantial portion of what Americans pay for prescription drugs is captured by intermediaries, some of whom neither develop nor directly provide these medications to patients.

Are PBMs and Other Participants in the Distribution System Making Too Much Money?

Our research finding that PBMs and other intermediaries account for 40 percent of prescription drug spending naturally raised the question: Are these firms making too much money in distributing drugs from manufacturers to consumers. To rigorously answer this question, we analyzed the financial performance of publicly-traded companies in the pharmaceutical supply chain between 2013-2018 and compared their returns to the average for S&P 500 companies. In this study, excess returns were calculated as the difference between return on invested capital and the weighted average cost of capital.

When treating research & development as an investment, we find that insurers/PBMs/retailers have significantly higher excess returns compared to the S&P 500 (5.9% vs. 3.6%).[3] We grouped these firms together because of the high levels of vertical integration and consolidation of these players, which made parsing out returns impossible.

These findings suggested that the pharmaceutical distribution system is not functioning as a normally competitive market. Instead, entities like vertically-integrated PBMs were able to extract economic rents well beyond what would be expected in a competitive marketplace.

The Insulin Case Study: A Worsening Problem

Insulin provides an important case study in how PBMs seem to be leveraging their market power and extracting profits at the expense of patients. Between 2014 and 2018, while total expenditures on insulin increased modestly, manufacturers were receiving a significantly smaller share of these expenditures: In total, net prices received by manufacturers decreased by 33 percent.[4]

During this same period, the share of insulin expenditures captured by PBMs increased nearly three folds, from $5.64 out of every $100 spent on insulin to $14.36. This means that while

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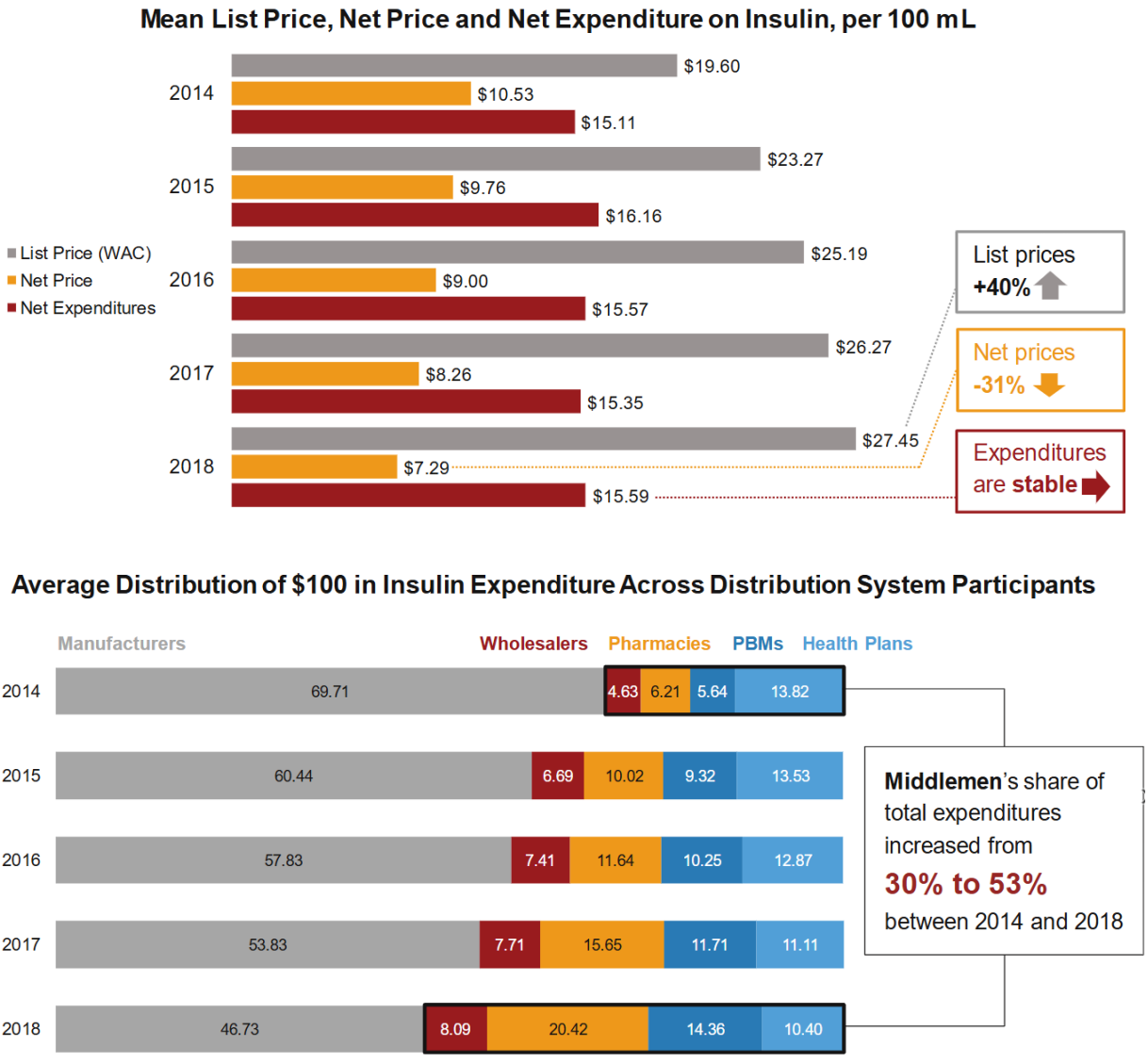
[2] Sood, N., Van Nuys, K., & Goldman, D. (2017). Flow of Money Through the Pharmaceutical Distribution System. *USC Schaeffer Center White Paper Series.*

[3] Sood, N., Mulligan, K., & Zhong, K. (2021). Do companies in the pharmaceutical supply chain earn excess returns?. *International Journal of Health Economics and Management*, *21*, 99-114.

[4] Van Nuys, K., Ribero, R., Ryan, M., & Sood, N. (2021, November). Estimation of the share of net expenditures on insulin captured by US manufacturers, wholesalers, pharmacy benefit managers, pharmacies, and health plans from 2014 to 2018. In *JAMA Health Forum* (Vol. 2, No. 11, pp. e213409-e213409). American Medical Association.

PBMs were successfully extracting lower prices from manufacturers, they were not passing these savings on to patients or payers. Rather, they were retaining an increasingly large share of the money flowing through the system.

Figures 2 and 3: Price and Expenditure Analysis of 32 Insulin Products Between 2014-2018



Source: Van Nuys, et al (2021) JAMA Health Forum/ USC Schaeffer

Put simply, PBMs were doing part of their job—negotiating lower prices from manufacturers—but failing at another crucial aspect: ensuring these savings benefited patients and the healthcare system more broadly.

My colleagues and I also documented that this trend towards higher PBM rebates creates another inefficient dynamic: We find that a $1 increase in rebates leads to a $1.17 increase in list prices

charged by manufacturers.[5] Higher list prices mean higher out-of-pocket costs for consumers at the pharmacy counter and also higher profits for wholesalers and pharmacies. Therefore, the current system of confidential rebates and opaque relationships in a highly concentrated market benefits everybody other than the American patient.

Vertical Integration of PBMs and Resulting Conflicts of Interests

PBMs have increasingly become vertically integrated. That is, different stages of the drug supply chain—insurers, PBMs and pharmacies—are consolidated under a single corporate entity. Such vertical integration raises significant antitrust concerns.[6] For example, a PBM that owns pharmacies has strong incentives to prioritize its own pharmacies and disadvantage independent pharmacies. This results in lower competition in the pharmacy market and restricted choice for patients. Similarly, a PBM that is vertically integrated with an insurer but also provides PBM services to other insurers has a strong incentive to disadvantage its insurer clients that compete with its parent insurer. Again, this results in lower competition in the insurance market and higher premiums for consumers. In a recent study, we found the market share of insurance companies owned by PBMs grew from approximately 30 percent to 80 percent between 2010 and 2018 in the Medicare Part D market.[7] At the same time, premiums increased for non-vertically integrated insurers who receive PBM services from a rival plan. These premium increases became more pronounced as standalone PBMs exited the market or were acquired by vertically-integrated PBMs. These findings suggest that vertically-integrated PBMs raise rivals costs and increase premiums for Medicare beneficiaries.

PBM Practices Harming Competition and Consumers

Our research has uncovered numerous ways in which PBM practices are harming both consumers and competition:

1. **Driving up Drug List Prices:** Our research demonstrates that PBMs significantly contribute to rising prescription drug list prices through their rebate negotiation model. The percentage-based rebate structure creates a perverse incentive for manufacturers to continually increase list prices to satisfy PBMs' demands for larger rebates to maintain formulary placement. Our analyses found that for every $1 increase in manufacturer rebates paid to PBMs, list prices rise by approximately $1.17.[8] This system particularly harms patients with high-deductible plans or coinsurance, who pay based on inflated list prices rather than the lower net price after rebates—undisclosed savings that rarely reach consumers at the point of sale.

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[5] Sood, N., & Van Nuys, K. (2020). The Association Between Drug Rebates and List Prices. *USC Schaeffer Center White Paper Series.*
[6] https://www.insurance.ca.gov/01-consumers/110-health/60-resources/upload/Sood-AMA-finalv3.pdf
[7] Gray, C., Alpert, A. E., & Sood, N. (2023). *Disadvantaging Rivals: Vertical Integration in the Pharmaceutical Market* (No. w31536). National Bureau of Economic Research.
[8] Sood, N., & Van Nuys, K. (2020). The Association Between Drug Rebates and List Prices. *USC Schaeffer Center White Paper Series.*

2. **Steering to Higher-Cost Drugs:** The rebate system created by PBMs often leads to higher-cost drugs being placed in preferred positions on formularies, while lower-cost alternatives—including generics and biosimilars—face restrictions or exclusions. This practice increases costs for both patients and the healthcare system while undermining the cost-saving potential of generic and biosimilar competition.
3. **Reducing the Potential Savings from Generic Drug Competition:** In a study published in JAMA Internal Medicine, Schaeffer experts found that Medicare could have saved $2.6 billion in 2018 on just 184 common generic drugs if they had been purchased at Costco cash prices instead of through Medicare Part D plans.[9] Involving the PBM and health plan increased costs by an average of 21%. This finding directly contradicts the promise of generic drugs as a source of cost savings in our healthcare system.
4. **Restricting Patient Access:** Over the last decade, PBMs have increasingly restricted patients' access to medications through utilization management policies. Research by my Schaeffer colleagues found that the share of drugs restricted in non-protected classes in Medicare Part D rose from an average of 31.9 percent in 2011 to 44.4 percent in 2020. By 2020, Medicare plan formularies excluded an average of 44.7 percent of brand-name-only drugs.[10] These restrictions can compromise patient care and health outcomes.
5. **Driving Up Costs Through Spread Pricing and Hidden Fees:** PBMs often charge health plans more for a drug than they reimburse pharmacies, pocketing the difference. Additionally, they collect various fees from manufacturers, pharmacies, and plans, further obscuring the true cost of prescription drugs and making it difficult for clients to assess whether they are receiving fair value.
6. **Limiting Competition Through High Market Concentration**: A recent study we published in JAMA examined PBM market concentration across different payer types.[11] The researchers found that all three markets—Medicare Part D, Medicaid, and commercial insurance—exceeded the Department of Justice's threshold for "highly concentrated" markets. Just three PBMs—CVS/Caremark, Express Scripts, and OptumRx—control about 80 percent of the prescription market, with the top five PBMs controlling 93.6 percent of the Medicare Part D market. This high concentration limits competition and innovation.

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[9] Trish, E., Gascue, L., Ribero, R., Van Nuys, K., & Joyce, G. (2021). Comparison of spending on common generic drugs by Medicare vs Costco members. *JAMA Internal Medicine*, *181*(10), 1414-1416.
[10] Joyce, G., Blaylock, B., Chen, J., & Van Nuys, K. (2024). Medicare Part D Plans Greatly Increased Utilization Restrictions On Prescription Drugs, 2011–20: Study examines Medicare Part D restrictions. *Health Affairs*, *43*(3), 391-397.
[11] Qato, D. M., Chen, Y., & Van Nuys, K. (2024). Pharmacy benefit manager market concentration for prescriptions filled at US retail pharmacies. *JAMA*, *332*(15), 1298-1299.

Policy Recommendations

While PBMs serve an important function—negotiating on behalf of health plans with drug manufacturers and pharmacies—their current practices often work against the interests of patients. We should not eliminate PBMs, but we can implement policies that ensure they act in the best interests of consumers and create a more transparent and competitive marketplace. The following policy approaches should be considered:

1. **Establish Fiduciary Responsibility:** Require PBMs to act as fiduciaries to their clients, including health plans, employers and public programs. This would legally obligate them to make decisions that are in the best interest of plan sponsors and program participants, addressing the fundamental misalignment of incentives that exist today.
2. **Increase Market Transparency:** HHS should develop and publish high-quality, public benchmarks for average prices by drug for key transactions in the supply chain. These benchmarks would help payers evaluate PBM performance, facilitate price shopping, and intensify competitive pressure in the PBM market. Survey responses should be mandatory to ensure representative and accurate data.
3. **Reform the Rebate System:** The current system of confidential rebates inflates list prices, directly increasing patients' out-of-pocket costs. Patients should pay cost-sharing based on actual post-rebate prices, not these artificially inflated list prices. This will be increasingly important as patient cost-sharing is increasing. Recent Schaeffer research demonstrates a troubling trend in Part D: beneficiaries are increasingly exposed to full list prices through coinsurance as the share of stand-alone Part D prescription drug plans using coinsurance for preferred branded drugs increased from 9.9% in 2020 to 71.9% in 2024.[12] Reforming the rebate system would ensure patients actually benefit from discounts negotiated on their behalf.
4. **Scrutinize Vertical Integration:** The potential for anticompetitive effects from vertical integration in the PBM industry warrants close antitrust scrutiny. Regulators should investigate practices that weaken standalone competitors, such as steering lucrative prescriptions to affiliated pharmacies or giving preferential treatment to affiliated plans.
5. **Right-size Information Asymmetry:** All PBM clients should have unfettered access to their pharmacy claims data to verify the value and efficiency of their drug benefit.

Conclusion

The bipartisan legislation introduced by Chairman Grassley and members of this committee represents an important step toward addressing these issues. Provisions to increase transparency and scrutinize vertical integration align with the evidence-based recommendations emerging from our research.

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[12] Trish, E., Blaylock, B., & Van Nuys, K. (2025). Cost Sharing for Preferred Branded Drugs in Medicare Part D. *JAMA*, *333*(13), 1170-1172.

Our pharmaceutical distribution system should work for patients, not against them. It should promote competition and innovation, not stifle it. And it should help control healthcare costs, not contribute to their unsustainable growth.

By implementing reforms that increase transparency, align incentives, and restore competition, we can ensure that PBMs fulfill their intended role: helping to make prescription drugs more affordable and accessible for all Americans.

Thank you for the opportunity to testify today. I would be happy to answer any questions.