

## **Testimony of Karen Van Nuys, Ph.D.**

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Before the

U.S. Senate Finance Committee

Pharmacy Benefit Managers and the Prescription Drug Supply Chain:  
Impact on Patients and Taxpayers

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### **Key Points:**

- PBMs play a central role in the economic system that distributes and pays for life-saving drugs in the United States. Evidence indicates they leverage their position to extract profits in ways that are detrimental to patients, payers, and the drug innovation system more broadly.
- PBMs in some cases increase drug costs to patients and taxpayers; our study suggests Medicare pays 21% more for the most common generic drugs than they would if purchased at Costco.
- The rebate system by which PBMs negotiate with manufacturers to gain market access distorts incentives; indeed, it increases list prices for brand drugs, which can have significant adverse impact on patients.
- PBMs sometimes steer patients toward more expensive drugs; there are many examples of PBMs providing more favorable formulary placement to expensive brand drugs than to lower cost generics, presumably in exchange for larger rebates.
- Research on the economic rents earned by different sectors of the distribution system indicates PBMs and other intermediaries earn excess returns after adjusting for risk.
- Increased transparency could shed light on how widespread such practices are, and their overall impact on drug prices and spending. Greater transparency could also provide purchasers better information about the prices and alternatives they face, and help lower costs to patients and taxpayers.

Chairman Wyden, Ranking Member Crapo, and Honorable Members of the Committee, thank you for the opportunity to testify today about the practices of pharmacy benefit managers (PBMs) and their impacts on patient costs and drug spending. My name is Karen Van Nuys, and I am an economist and Senior Fellow at the Leonard D. Schaeffer Center for Health Policy & Economics at the University of Southern California, where I also direct the Value of Life Sciences Innovation research program. The opinions I offer today are my own, and build on [previous statements made to the Federal Trade Commission](#) and in other publications.

## **Background**

At the Schaeffer Center, my colleagues and I have been studying prescription drug markets for well over a decade, with particular emphasis on the economic system that distributes and pays for life-saving drugs. That system includes several intermediaries or “middlemen,” who each play a role in getting the physical product (the drugs) from the manufacturer to the patients who need them, and then managing the financial flows that ensure that everyone along the way is paid for playing their part in that system. The Schaeffer Center was among the first research institutions to highlight this complex market and quantify its role in drug prices, with [one of our earliest studies](#) demonstrating that, out of \$100 spent on retail pharmaceuticals in 2013, \$41 went to distribution system intermediaries.

Pharmacy benefit managers (PBMs) play an important role in that system. They can, and often do, provide much-needed services to drug companies, insurers, employers and patients. PBMs sit in the middle of nearly all of the financial transactions in that drug delivery system, a position that provides them with extraordinary information access and leverage.

Their position has only solidified as PBMs have merged with other distribution system participants over the last decade, resulting in an industry that has become more vertically integrated. The top three PBMs are each part of a [corporate structure](#) that also includes an insurer, specialty pharmacy and healthcare provider. Some include retail pharmacies as well. Those three companies ranked #4, #5 and #12 on [Fortune’s list](#) of the largest public companies in America last year. Using a different yardstick, the top three PBMs handle [80% of all US prescription volume](#).

While their size may make PBMs more formidable when negotiating with drug manufacturers and enable them to bring about lower drug prices, it can also position them to suppress competition, capture excess profits and raise drug costs. Which of these two possibilities prevails is ultimately an empirical question that much of our research seeks to answer.

Estimating pharmaceutical market money flows can be challenging, because much of the data on pharmaceutical prices is confidential, proprietary, masked, or otherwise opaque to outside researchers. Without transaction prices, it is difficult to conduct a broad, comprehensive analysis that could prove definitively whether PBMs are lowering drug costs. Instead, drug price researchers like myself must conduct studies using the incomplete data available to us to shine slivers of light into the dark corners of the system, and from these

glimpses, assemble a kind of collage of the overall picture. I summarize some pieces of the picture here:

### **PBMs' Impact on Generic Drug Costs**

An analysis we published in [JAMA Internal Medicine in 2021](#) compared what Medicare paid for 184 of the most common generic drugs with what those same prescriptions would have cost cash-paying members at Costco. We found that Medicare could have saved \$2.6 billion in 2018 on just those 184 drugs if they had been purchased without insurance at Costco. Somehow, involving the PBM and the health plan in the transaction increased drug costs by 21%.

PBMs use several commercial tactics that together may explain those higher costs. One is the copay clawback, in which PBMs collect a patient copay that exceeds the total cost of the drug, keeping the excess. My colleagues and I used data from a short-lived federal survey in 2013 (the National Average Retail Price, or NARP) to compare patients' copayments with the reimbursement pharmacies collected to settle the claims. [We found](#) that 23% of prescriptions incurred a copayment that exceeded the PBM's cost of the drug. When an overpayment occurred, it averaged \$7.69 per claim, which went to the PBM. The practice was especially common on generic prescriptions, with 28% of generic scripts involving a clawback. Many of the most common generic prescriptions [involved overpayments](#) on more than half of claims, including prednisone (50%), simvastatin (52%), amlodipine besylate (60%) and zolpidem tartrate (60%).

Federal legislation passed in 2018 banned the gag clauses that prevented pharmacists from telling clients when their copayment exceeded the cash price of their prescription. This has likely curbed some copay clawback activity, but the fact that federal legislation was necessary to stop PBMs from blocking pharmacists who wanted to help patients save money is telling. PBMs frequently claim they are "[on patients' side](#)," but gag clauses, and the one-in-four prescriptions with a copay clawback, appear to favor PBMs rather than patients.

A second PBM tactic that raises drug costs is "spread pricing," in which the PBM pays the pharmacy one price to fill a prescription, then charges the health plan a higher price to settle the same claim, pocketing the difference. [The Ohio state auditor found](#) that PBMs charged, on average, 31% spreads for generic drugs in that state's Medicaid managed care program between 2017 and 2018.

### **The Flow of Money: PBMs Impact Drugs' List Prices**

While PBMs may increase the cost of generic prescriptions, [branded drugs account for most of drug expenditures](#), making PBM impacts on prices in those markets especially important. To better understand how middlemen impact brand drug markets, my Schaeffer colleagues and I [studied the money flows to distribution intermediaries](#) from insulin sales between 2014 and 2018. We found that insulin list prices rose 40% in five years while the average net price—what manufacturers received after all rebates, fees and discounts—decreased by

31%. At the same time, the total amount spent per 100mL of insulin barely changed, growing just 3%.

PBMs frequently tout the role they play in negotiating lower prices from drug manufacturers. Given that insulin manufacturers received lower net prices between 2014 and 2018, PBMs were clearly successful in negotiating steep price concessions. But they were evidently not passing those savings along to patients, since total insulin expenditures for consumers and taxpayers remained flat. Instead, intermediaries in the distribution chain, including PBMs, were capturing the savings: out of every \$100 spent on insulin, intermediaries claimed \$31.29 in 2014, climbing to \$53.27—more than half—by 2018. PBMs' share alone grew 155%, from \$5.64 in 2014 to \$14.36 in 2018. Price discounts do not benefit patients or premium payers if they don't result in lower expenditures. Patients care about the total amount they spend per 100mL of insulin, not whether their money is going to manufacturers or to other entities in the distribution system.

Manufacturers do not determine list prices on their own. List prices are the result of a complicated dynamic that involves both PBMs and manufacturers. The 40% growth we observed in insulin list prices is the result of strong incentives for list price increases that are embedded in the current rebate system. Manufacturers compete with one another for preferred formulary placement on the basis of both list prices and rebates. PBMs consider manufacturers' offers, knowing that they will get the rebate, while the manufacturer will get (roughly) the list price minus the rebate (the net price). All other things equal, PBMs have a clear financial incentive to prefer larger rebates (either because they retain a share, or because their clients prefer higher passed-through rebates), so if insulin manufacturers want to stay on the formulary, they need to offer high rebates. This results in upward pressure on list prices: as PBMs seek higher rebates, manufacturers increase their list prices to accommodate those rebates. PBMs may also collect administrative fees from manufacturers that are calculated as a percentage of list prices, strengthening their incentives to push for higher list prices.

Schaeffer researchers published a [study in JAMA Network Open in 2021](#) that demonstrated the broader impact of these price negotiation dynamics. They find that the most competitive drug classes, those with both brand and generic competitors, feature the fastest growth in list prices, presumably because PBMs can negotiate most aggressively when there are multiple competitors to pit against one another. The ratio of list price to net price grew fastest for drugs in that class as well, from 2.7 in 2014 to 3.4 in 2018, compared with drugs with only branded competitors and those without any competition. In other words, as competition increases, manufacturers vie for preferred formulary placement by offering PBMs larger rebates, which creates upward pressure on list prices. This runs counter to conventional wisdom—we typically expect greater *downward* pressure on prices the more competitive the market. With drugs, we see greater *upward* pressure on list prices in more competitive markets.

## **Rebate-Driven Increases in List Prices Hurt Patients**

Increasing list prices are not purely an accounting phenomenon, they have real consequences. Patients without insurance may pay list prices directly, while patients who are insured may be exposed to list prices while they are in the deductible phase of their benefit. And coinsurance amounts paid by patients are frequently defined as a function of the list price. The same [2021 JAMA Network Open study](#) found that Medicare Part D participants who were exposed to cost-sharing based on the list price had out-of-pocket spending that grew 50% faster for drugs with branded competitors compared with drugs with no competition.

PBMs have deflected blame for these rebate and list price dynamics by [pointing out](#) that they pass through most of the rebates they collect to health plans, who may then use them to keep premiums low for beneficiaries. But the ultimate result of such practices is to decrease the effective generosity of insurance by reducing premiums while increasing out-of-pocket costs—effectively, this transfers resources from sick people to healthy premium-paying beneficiaries. This is of course [the opposite of insurance](#), which is supposed to pool funds from a large, mostly healthy group of beneficiaries and use it to defray the costs of those who experience the misfortune of falling ill.

## **PBMs Can Steer Patients Toward More Expensive Drugs**

These list price/rebate dynamics can distort formulary design in ways that raise total spending. Most dramatically, this occurs when patients are steered to expensive brand medications, even when a lower cost generic equivalent is available. [Researchers studying Medicare Part D formularies](#) found that 72% of them placed at least one branded product in a lower cost-sharing tier than its generic product; 30% of formularies adopted fewer utilization controls on the branded product than its generic equivalent for at least one drug. Among the 222 drugs studied, the median branded product price was 3.9 times higher than the generic price.

Other examples abound. In 2019, well before their patents were due to expire, [Gilead introduced](#) authorized generic versions of their branded Hepatitis C cures Epclusa and Harvoni. These versions were identical to the branded products, but had greatly reduced list prices and rebates, giving PBMs the choice to prefer the high list/high rebate branded version or the lower list/lower rebate authorized generics on their formularies. At the time, the manufacturer noted that patients in Medicare plans covering the authorized generics could save up to \$2,500 in out-of-pocket costs.

And yet, when the [Office of the Inspector General studied Medicare formulary placement](#) for these drugs, it found that “[i]n 2020, nearly half of Part D plans covered Epclusa or Harvoni but did not cover the authorized generic versions that were specifically launched to reduce patient costs.” By the end of 2020, less than 20% of Medicare patients receiving either branded Harvoni or its authorized generic were receiving the cheaper version.

Recent experiences with the pricing of new biosimilar versions of expensive biologics demonstrate the same perverse formulary dynamics. FDA recently approved the first insulin [biosimilar that is interchangeable](#) with Lantus, an expensive branded insulin. The manufacturer, Viartis, launched two versions of the drug—branded Semglee, with a list price just 5% below that of Lantus, and an authorized but unbranded version, Glargine, with a 65% lower list price than Lantus. Both are interchangeable with the originator Lantus product. The net prices to the manufacturer are likely similar across the two versions, with the branded Semglee offering substantially larger rebates than Glargine. Express Scripts [announced](#) that they would prefer the biosimilar on their largest formulary, covering 28 million lives, in 2022 and would exclude the originator Lantus product. But the preferred product chosen was the high list price/high rebate Semglee, while the low list price/low rebate Glargine was excluded from the formulary.

More recently, in January, Amgen [launched](#) Amjevita, the first biosimilar to the blockbuster rheumatoid arthritis drug Humira. As in the Semglee example, Amgen also went with two options—a high list/high rebate version at a 5% discount to Humira, and a low list/low rebate version at a 55% discount. Shortly thereafter, Optum released its [formulary changes for February 2023](#). On both its Premium and Select formularies, Optum placed the high-list-price version on Tier 2 (preferred brand), preferring it over the low-list-price version. The low-price version was excluded altogether from the Premium formulary, and placed on Tier 3 for the Select formulary, requiring that patients first try and fail the high-priced biosimilar and the still higher priced Humira before gaining access to the low-list-price biosimilar.

### **PBMs Earn Excess Returns**

In market economies, a firm's quest for profit is both expected and, in most cases, desirable. But this quest for profits can be harmful if the profits generated are not commensurate with the value delivered to society; in such cases, policymakers may be expected to intervene. In the present case, the question is whether the profits earned by PBMs are justified. To answer it, we must evaluate whether the money they make is "excessive" in some risk/reward sense. High returns may be justified if large risks are undertaken to earn them; manufacturers' high profit margins are often justified by the large risks involved in developing new drugs, [most of which fail to make it to market](#). By contrast, PBMs' contracts with health plans do not typically expose them to financial risk for drug spending, nor do they assume significant inventory risk; in the retail drug market, PBMs do not even take possession of the product.

Schaeffer researchers studied the risk-adjusted returns of distribution system participants in 2013-2018. Comparing the adjusted return on invested capital to firms' weighted average cost of capital, they [found](#) that pharmaceutical manufacturers' excess returns fall below those of the S&P 500 (1.7% vs. 3.6%), while those for biotech manufacturers (9.6%), wholesalers (8.1%), and insurers/PBM/retailers (5.9%) remain significantly above them. (PBMs could not be disaggregated from the insurer/PBM/retailer category since so many of the companies in the sample were integrated across these parts of the distribution system.) They also found that excess returns for the insurer/PBM/retailer sector increased over the study period, when both horizontal and vertical consolidation were also increasing. Broadly, these results suggest that the returns earned by companies in that category, including both

standalone and integrated PBMs, are not explained by the risks they bear, and may instead reflect anticompetitive commercial tactics.

**Conclusion: Greater Transparency and Oversight is Warranted**

The tactics illustrated here demonstrate some of the methods PBMs use to leverage their market power and the opacity of the system in ways that harm consumers and taxpayers. While it is true that PBMs also provide valuable services, the information asymmetry inherent in their position in the distribution system, the misaligned incentives that govern their behavior, and the trend towards increased vertical consolidation, should all be concerning to policymakers and regulators.

Increased transparency that gives market participants visibility into the prices they are facing would enable them to make more informed economic decisions and help level the playing field. And stricter reporting requirements for more granular transaction data would allow regulators (and potentially researchers) to analyze specific markets and tactics, identify problems more quickly, and offer more targeted solutions.