THREE AXIS ADVISORS

46brooklyn

Current State of Drug Affordability in the U.S.

ANTONIO CIACCIA

CEO & Co-founder | 46brooklyn Research

President & Co-founder | 3 Axis Advisors

Antonio Ciaccia
President, 3 Axis Advisors

- After years of government affairs work at the Ohio Pharmacists Association, a few anecdotal reimbursement complaints from pharmacies grew into a loud chorus that pushed me into the bowels of the prescription drug supply chain.
- Severe pharmacy margin pressure in Ohio Medicaid managed care during a period of massive state drug spending growth drove me to search for where the money was going.
- Years of learning and digging led to the uncovering of hundreds of millions of dollars in hidden drug costs and a nationwide reckoning for drug pricing reform.
- Launched 46brooklyn Research in 2018 to publish and translate publicly available drug pricing data for free.
- Launched 3 Axis Advisors in 2019 to help others solve drug pricing riddles using more extensive data research and analysis. Clients include Medicaid Fraud Control Units, government agencies, provider groups, research firms, technology companies, law firms, investment analysts, employers, benefit consultants, private foundations, and industry disruptors.

The field of play

Our drug distribution system

Primary players

- Drug manufacturers
- Drug wholesalers
- Pharmacies
- Pharmacy benefit managers
- Health insurers

Other players

- Group purchasing organizations
- Pharmacy services administrative organizations
- Repackagers/relabellers
- Rebate aggregators
- Benefits brokers/consultants

Our drug distribution system

Primary players

- Drug manufacturers *
- Drug wholesalers *
- Pharmacies *
- Pharmacy benefit managers *
- Health insurers *

Fortune 50 (as of June 2025)

#1 Walmart *

#2 Amazon *

#3 UnitedHealth Group ****

#5 CVS Health ****

#9 McKesson *

#10 Cencora *

#12 Costco **

#14 Cigna ****

#15 Cardinal Health *

#20 Elevance ***

#23 Centene ***

#26 Walgreens **

#27 Kroger **

#39 Humana ***

#48 Johnson & Johnson *

Our drug distribution system

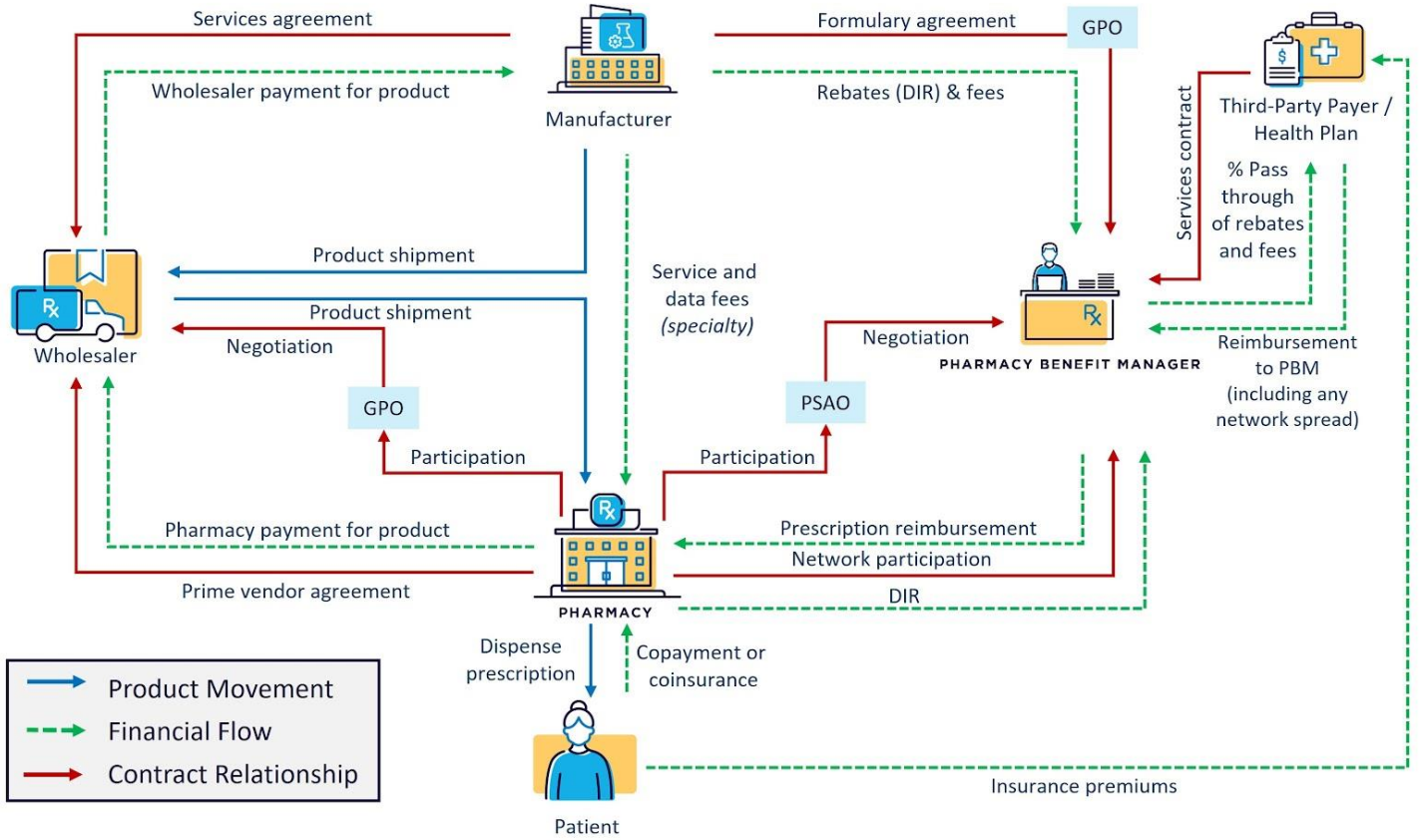
While there are many smaller, independent players at each layer of the drug channel, it is reasonable to assume that the primary goal of the largest publicly traded companies is to increase returns to shareholders – it is their true fiduciary obligation.

This is important to remember – not because profit incentive is wrong – but because it's vital to understand the incentives that drive supply chain behavior.

In our efforts to control prescription drug costs, a proper calibration of incentives is necessary to ensure efficient spending and maintain robust access to pharmaceuticals.

The flow of products and dollars

The U.S. Pharmacy Distribution and Reimbursement System for Patient-Administered, Outpatient Brand-Name Drugs



GPO = group purchasing organization; PSAO = pharmacy services administrative organization; DIR = direct and indirect remuneration

Source: *The 2024 Economic Report on U.S. Pharmacies and Pharmacy Benefit Managers*, Drug Channels Institute. Chart illustrates flows for Patient-Administered, Outpatient Drugs. Please note that this chart is illustrative. It is not intended to be a complete representation of every type of product movement, financial flow, or contractual relationship in the marketplace.

DRUG CHANNELS INSTITUTE
An HMP Global Company

What's the price?

When you make (things) vastly complicated …
the system often goes out of control

Charlie Munger

Which price are you talking about?

MANY PRICES AVAILABLE FOR DRUGS IN THE U.S.

What's happening with drug prices?

Brand drug list prices continue to go up over time

With 1,260 list price increases, **2021 had the highest number of brand list price hikes since 2018**

2023 had the highest number of January brand list price increases in over a decade

2021

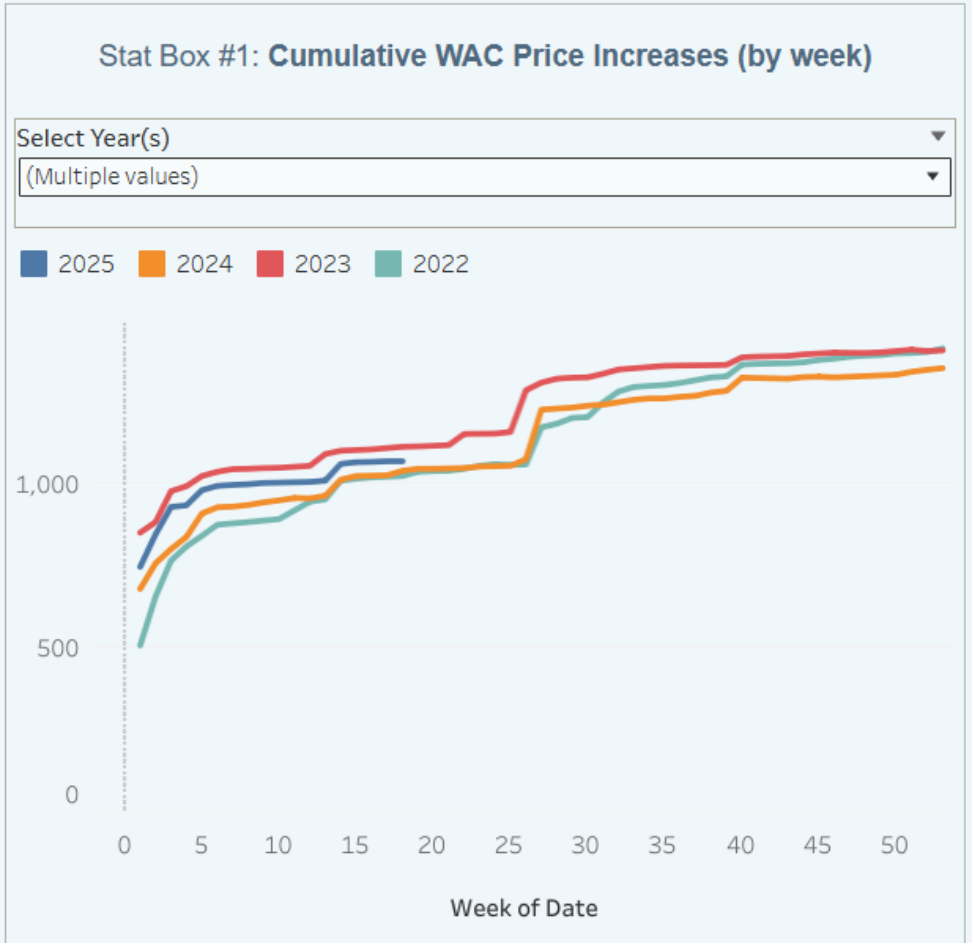
2022

2022 surpassed all of 2021's increases

2023

2024

2024 had less increases than 2022 and 2023, but 2025 is trending higher.



Source: 46brooklyn Research

But those are just list prices. What's happening to net costs?

PBM Power: The Gross-to-Net Bubble Reached $334 Billion in 2023—But Will Soon Start Deflating

Last week, the Federal Trade Commission (FTC) released its interim report on pharmacy benefit managers (PBMs). The report's unsubtle subtitle revealed how the agency views PBMs: The Powerful Middlemen Inflating Drug Costs and Squeezing Main Street Pharmacies. ICYMI, the FTC's report relied extensively on the Drug Channels Institute's (DCI's) *2024 Economic Report on U.S. Pharmacies and Pharmacy Benefit Managers*.

SpongeBob SquarePants, honorary mascot of the gross-to-net bubble

PBMs' negotiating leverage against pharmaceutical manufacturers has been a key factor inflating the **gross-to-net bubble**—the ever-growing dollar gap between sales at brand-name drugs' list prices and their sales at net prices after rebates, discounts, and other reductions.

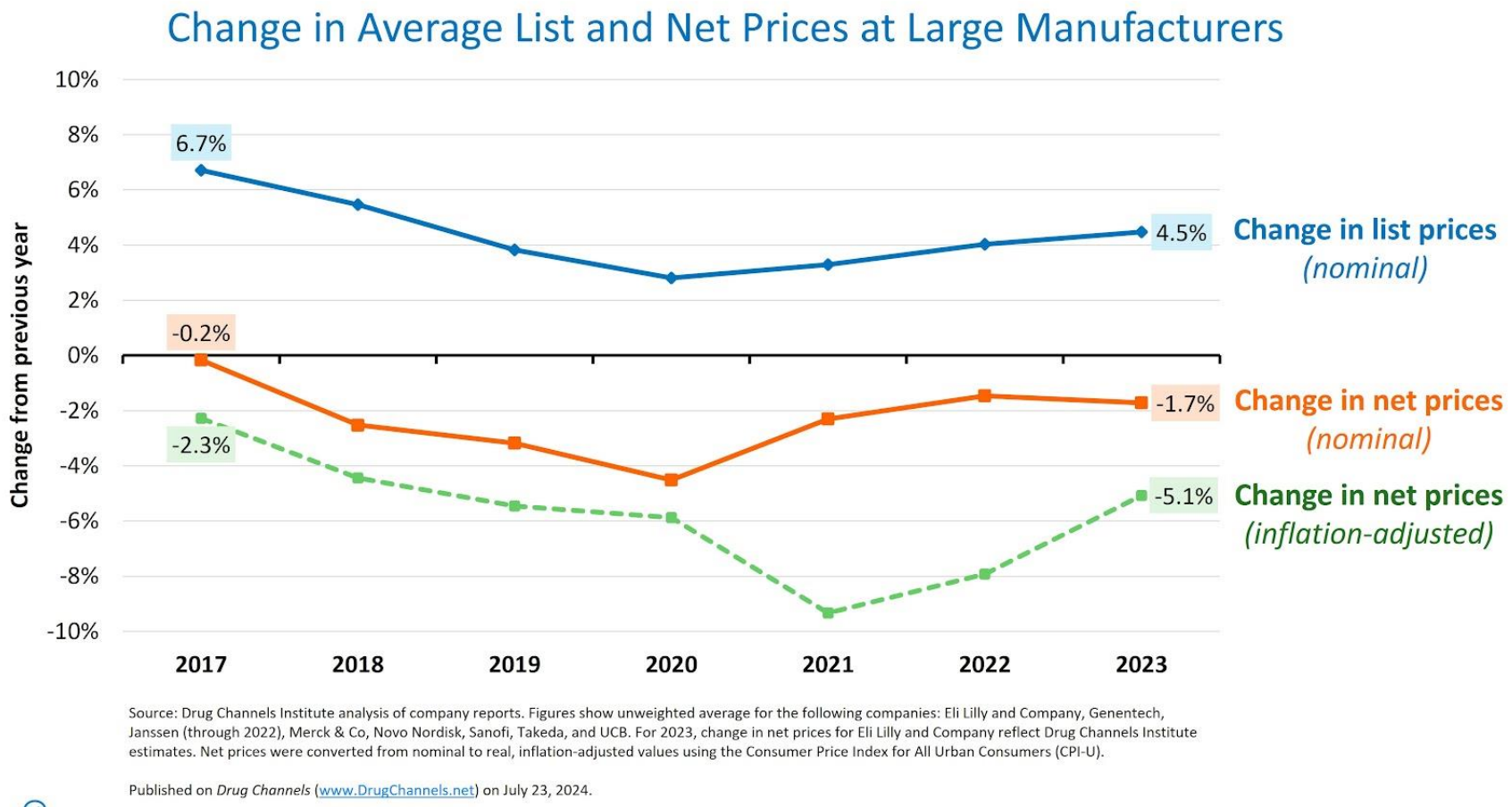
For 2023, DCI estimates that the total value of manufacturers' gross-to-net reductions for all brand-name drugs was $334 billion. (As we describe below, our latest estimates make a crucial change in the presentation of these figures compared with previous editions.)

Multiple forces are poised to pop the gross-to-net bubble for high-list/high-rebate products. This will force PBMs to further evolve their business models, while challenging plan sponsors and the FTC to follow the dollars.

Source: https://www.drugchannels.net/2024/07/pbm-power-gross-to-net-bubble-reached.html

- Brand drug manufacturers offer rebates to insurers and **pharmacy benefit managers (PBMs)** for preferential formulary placement, thus lowering net costs.
- However, federal officials have questioned the utility of rebates, due to the likelihood that manufacturers are inflating their list prices in order to accommodate for rebate concessions.

Drugmaker discounts and rebates are growing faster than list prices.



Source: https://www.drugchannels.net/2024/07/gross-to-net-bubble-update-2023-pricing.html

Are true brand drug costs going up or down? Are we getting a good deal? It's complicated.

- Because brand drug manufacturer rebates to PBMs, insurers, and "rebate aggregators" are confidential and vary widely from plan to plan, program to program, it's extremely difficult to pin down the net price being paid.
- Because government entities (VA, Medicaid, etc.) command such large rebates, smaller payers and patients who pay out-of-pocket pick up a disproportionate share of the overall cost.
- Because each plan/PBM promote utilization of different drug mixes, apples to apples comparisons of overall net costs is extremely difficult.
- **The inability to objectively determine what a fair price should be hinders the ability for true market forces to pressure drug supply chain margins and promote quality and efficiency.**

Regardless of where the dollars go, it's important ask what we want drug policy to accomplish

- Rebates are negotiated or government-mandated discounts that are enabled by special exemptions to anti-kickback laws
- Those discounts are used to fund a variety of priorities, like Medicaid, Medicare (under the IRA), the VA, lower insurance premiums, insurer/PBM profits, and provider healthcare services and profits (340B)
- As a result, our system has higher prices where the value of discounts don't always make their way to the end payer
- As such, focus on list prices is important, but a focus on the size of discounts and where discounts go is arguably just as important.

Drug policy perspectives emerge

- In a world of inflated drug prices, PBMs are entrusted to effectuate drug pricing reality through leveraged negotiation against manufacturers and pharmacies.
- But in general, two schools of thought have emerged that both threaten the legacy positioning of PBMs:
  - PBMs are ineffective in solving the broader pricing and affordability problems and should be replaced by a more heavy-handed government to secure lower drug costs.
  - PBM conflicts of interest and opacity have exacerbated the very drug affordability problems they were supposed to solve and should be reformed to secure lower drug costs.

Other drug policy corollaries

- Additional drug policy focuses include:
  - Right-sizing and reforming the 340B program
  - Protecting patient access to local pharmacies
  - Price transparency for plan sponsors
  - Uprooting conflicts of interest
  - Lowering patient cost sharing obligations (rebate pass-through, co-pay caps, etc.)
  - International pricing parity
  - Patent law reforms

For better or worse, government subs in for PBMs.

More discounts, please.

- As drug costs for government programs swell, policymakers avoid systemic changes but instead focus on getting bigger rebates and discounts.
- Building on the fundamentals of the Medicaid Drug Rebate Program, 340B Program, and Department of Veterans Affairs, Congress expands government-mandated discounts into the Medicare program via the Inflation Reduction Act.

IRA: Table-setting

- The IRA replaces PBMs with the power of CMS to directly negotiate with manufacturers to achieve a Maximum Fair Price (MFP) for a growing list of select medications.
- The IRA also imposes inflation penalties for prices increases that occur beyond rates of inflation, much like Medicaid and 340B have today.
- The introduction of Medicare's drug price negotiation program represents a shift in pharmacy reimbursement dynamics, fundamentally altering cash flow patterns for pharmacies for some of the most utilized brand drugs for one of the largest payers to pharmacy providers.

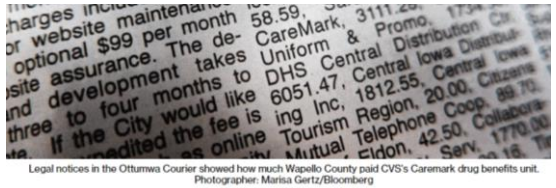
IRA reality check

- While IRA Medicare price negotiations are considered as a mechanism to “lower drug prices,” the policy maintains the current environment of bloated manufacturer list prices and arriving at lower “net costs” through discounting and rebating.
- In simple terms, discounting and rebating is facilitated in the broader market primarily through retrospective price concessions from manufacturers that are largely sanctioned through exemptions to federal anti-kickback laws.
- In practice, wholesalers and pharmacies purchase medications at inflated list prices, but a majority of drugmaker discounts go somewhere else, meaning that pharmacies rely on close-to-realtime reimbursements that reflect those list prices in order to be made whole on their purchases.
- The IRA breaks standard practice by capping reimbursement at wholesale acquisition cost (WAC) without any requirements for additional pharmacy margin; and it delays full payment to pharmacies by providing the negotiated MFP “net cost” reimbursement first and then pushing a supplemental payment (an MFP “refund”) to weeks after the transaction occurs, requiring pharmacies to float the dollars to make the program work.

For better or worse, government goes after PBMs.

Spread pricing hits home in Ohio

- Ohio Medicaid audit revealed $244 million in **spread pricing** from Q2 2017 to Q1 2018
- Spread pricing = the difference between the reimbursements paid to pharmacies and the rates reported back to the payer; PBM retains the difference
- Ohio's state Auditor David Yost conducted his own audit, and found that spread equated to 31.4% of gross generic spending in Ohio Medicaid managed care



Legal notices in the Ottumwa Courier showed how much Wapello County paid CVS's Caremark drug benefits unit.
Photographer: Marisa Gertz/Bloomberg

The Secret Drug Pricing System Middlemen Use to Rake in Millions

By Robert Langreth, David Ingold and Jackie Gu
September 11, 2018

Not everybody reads the legal notices inside the Ottumwa Courier. But in January, Iowa pharmacist Mark Frahm noticed something unusual in the paper.

Illustration: Sarah Grillo/Axios

Data analyses from 46brooklyn Research, a new firm started by two people with experience in the pharmacy industry, outline historic trends of drug prices and costs in Medicaid programs across the country in an open, transparent format.

The Columbus Dispatch
SUNDAY
HAPPY FATHER'S DAY!
LEGENDARY SALE & CLEARANCE! FINAL 3 DAYS! FRONTROOM furnishings
Sunday, June 17, 2018 | You can find $146.64 worth of savings in today's newspaper. | High: 91 Low: 73 Details, B12 | dispatch.com | $2.50

DISPATCH INVESTIGATION

Medicine middlemen reap millions

By Lucas Sullivan and Catherine Candisky
The Columbus Dispatch

A middleman company hired to keep the state's prescription-drug prices in check for Ohioans on Medicaid is receiving millions in taxpayer money meant to provide medications for the poor and disabled.

Records of transactions provided to The Dispatch from 40 pharmacies across Ohio show that CVS Caremark routinely billed the state for drugs at a far higher amount than it paid pharmacies to fill the prescriptions. The state-sanctioned practice, known as "spread pricing," allows the middlemen, called pharmacy benefit managers, to keep the difference on medications used to treat health concerns ranging from mental illness to osteoporosis.

CVS Caremark received more than $1.6 million for

See MIDDLEMEN, A3

Press Releases · Ohio Auditor of State

Auditor's Report: Pharmacy Benefit Managers Take Fees of 31% on Generic Drugs Worth $208M in One-Year Period

Geographic Price-Spread Disparities Found in Medicaid Pharmacy Payments

Facebook Twitter Email Print More 341

Thursday, August 16, 2018

Columbus - Ohio's Pharmacy Benefit Managers (PBMs) charged the state a "spread" of more than 31 percent for generic drugs – nearly four times as much as the previously reported average spread across all drugs, according to a new report by Ohio Auditor of State Dave Yost.

https://www.axios.com/data-showing-pbm-medicaid-drug-price-manipulation-1533059892-c2a97bcd-8874-42c2-a161-503e89666678.html
https://www.bloomberg.com/graphics/2018-drug-spread-pricing/ https://ohioauditor.gov/news/pressreleases/Details/5042 https://stories.usatodaynetwork.com/sideeffects/cost-cutting-middlemen-reap-millions-via-drug-pricing-data-show/

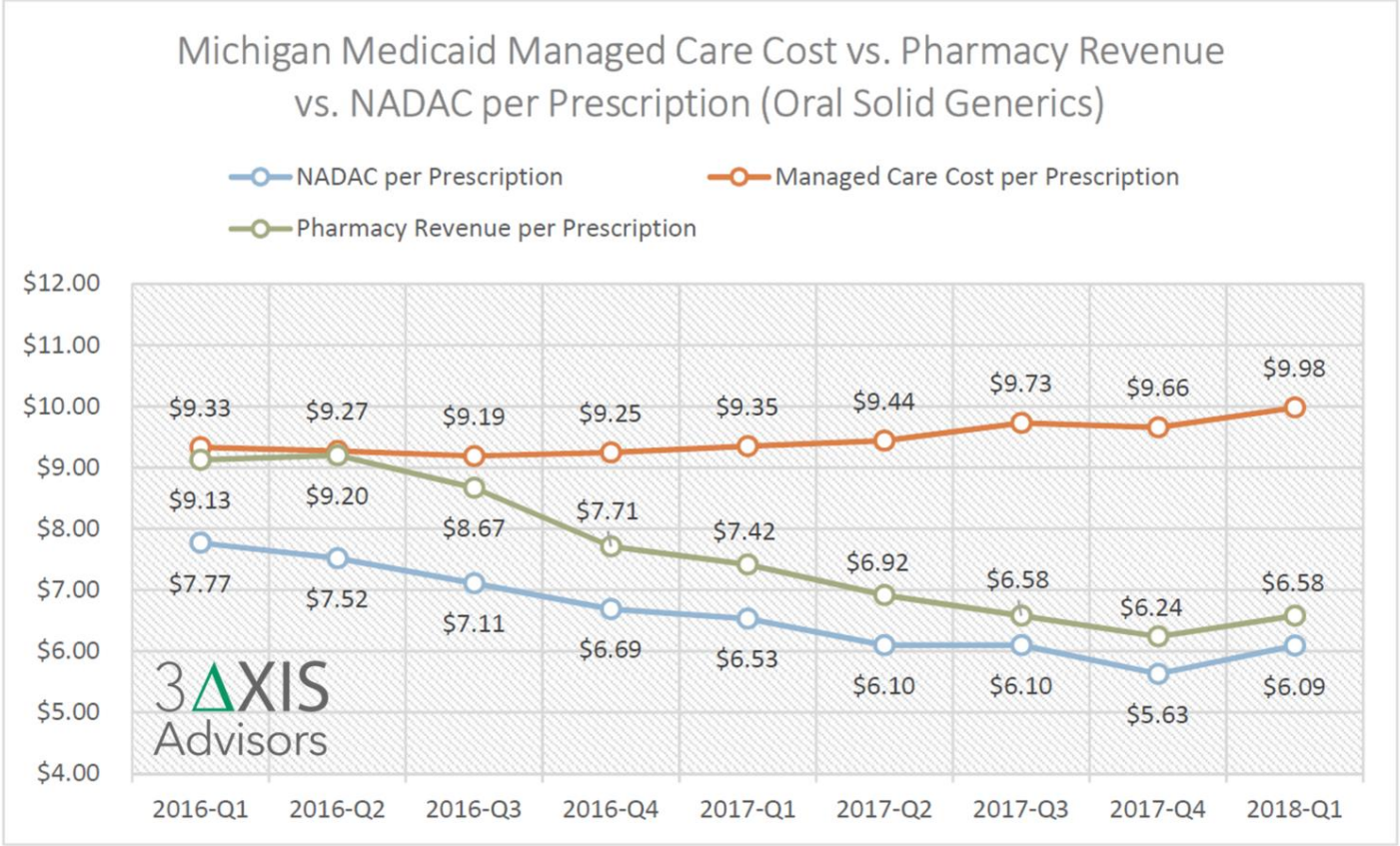
The first domino falls

- After firing the legacy PBMs and announcing reprocurement for the entire Medicaid managed care program, litigation commences.
- June 14, 2021: Ohio Attorney General Dave Yost announces the first major victory over PBM overcharges
  - Centene agrees to settle case over alleged prescription drug markups that were found in 2018 to be more than $11 per prescription under the plan.
  - $88 million to Ohio
  - $55 million to Mississippi
  - ***$165 million to Texas***
  - More than $1.1 billion set aside for other states
  - First and largest settlement in the country secured by a state attorney general against a PBM over these alleged arbitrage practices.
- "I will accept an apology note that has a dollar sign and many zeroes after it." - Yost

https://www.dispatch.com/story/news/2021/06/14/centene-to-settle-ohio-medicaid-lawsuit-attorney-general-dave-yost/7679946002/

Ohio wasn't alone

- 3AA analysis of Medicaid managed care pharmacy claims in Michigan showed:
  - Drug costs going down
  - Pharmacy margins going down
  - PBM spreads going up
  - State costs going up
- Spread pricing allows pharmacy-affiliated PBMs to shift traditional pharmacy margins to the PBM side of their enterprise.



https://www.3axisadvisors.com/projects/2019/4/28/analysis-of-pbm-spread-pricing-in-michigan-medicaid-managed-care

Ohio wasn't alone

- Other states began their own investigations into PBM spread pricing (Kentucky, Maryland, Virginia, Florida, Georgia, etc)
- Hundreds of millions of spread dollars were uncovered across the country
- States begin banning spread pricing

Langreth, R. "Drug Middlemen Took $123.5 Million in Hidden Fees, State Claims." Bloomberg. February 21, 2019. Available from: https://www.bloomberg.com/news/articles/2019-02-21/drug-middlemen-took-123-5-million-in-hidden-fees-state-claims

Langreth, R. "Drug Middlemen Face State Probes Over Complex Pricing System." Bloomberg. April 9, 2019. Available from: https://www.bloomberg.com/news/articles/2019-04-09/drug-middlemen-face-state-probes-over-complex-pricing-system

Kimsey, K. "Report on Managed Care Pharmacy Benefit (PBM) Transparency Report." Commonwealth of Virgina Department of Medical Assistance Services. October 1, 2019. Available from: https://rga.lis.virginia.gov/Published/2019/RD593/PDF

Gruber, VL. " Maryland Department of Health Pharmacy Services Audit Report." August 2020. Available from: https://www.ola.state.md.us/umbraco/Api/ReportFile/GetReport?fileId=5f513421a1ce580c50fe694b

Silverman, E. "Florida finds pharmacy benefit managers are benefiting from a lucrative profit center." STAT. December 9, 2020. Available from: https://www.statnews.com/pharmalot/2020/12/09/florida-pbm-pharmacy-medicaid/

Spread is dead. Long live the spread.

“Pharmacy benefit managers are making millions of dollars through Ohio's Medicaid program for which Medicaid can't account.

That's because the PBMs are collecting controversial cash ‘clawbacks’ from pharmacies after the state has closed its books on prescription-drug purchases for more than 3 million poor and disabled Ohioans, Medicaid Director Maureen Corcoran acknowledged Wednesday before a legislative watchdog panel.

So the actual cost of hundreds of thousands of Medicaid drug transactions as recorded by the state and reported to the federal government in recent years is inaccurately inflated.

Not only that, but PBMs also are violating at least the intent and spirit of an Ohio law banning clawbacks, as well as a measure mandating pass-through pricing, Corcoran said. The latter requires PBMs to charge the state the same price they pay pharmacists to fill a prescription for a Medicaid recipient.

After the Joint Medicaid Oversight Commission meeting, Corcoran added another revelation: **The data on which Ohio Medicaid relies to set its payment rates — including how much state and federal taxpayers are assessed — likely are wrong as well.”**

The Columbus Dispatch

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NEWS

Medicaid chief quietly drops bombshell: Millions obtained by PBMs unaccounted for by state

Darrel Rowland
The Columbus Dispatch

Published 2:42 p.m. ET Oct. 27, 2021 | Updated 11:43 a.m. ET Oct. 28, 2021

View Comments

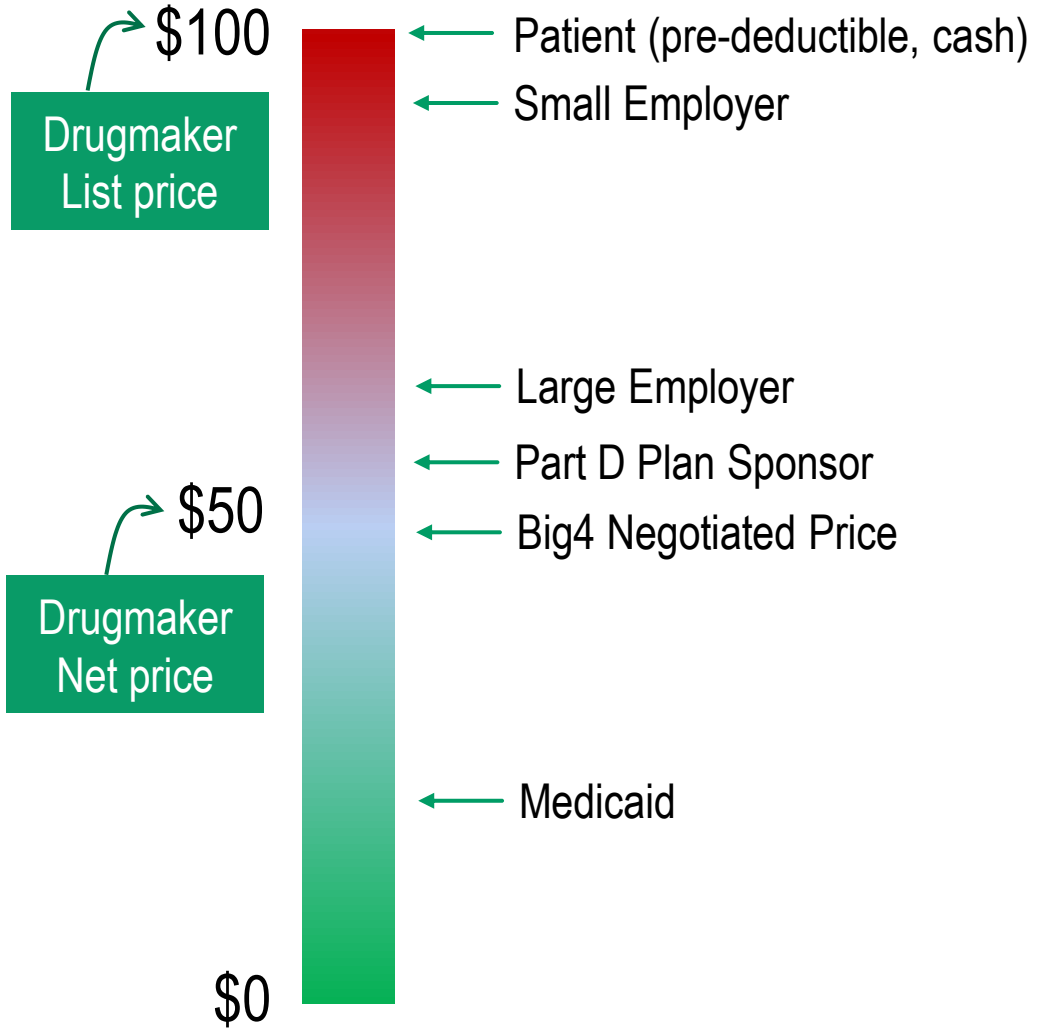
Ohio Medicaid Director Maureen Corcoran responds to questions from members of the Joint Medicaid Oversight Committee in August 2020. *Adam Cairns/Dispatch*

Pharmacy benefit managers are making millions of dollars through

Reference: https://www.dispatch.com/story/news/2021/10/27/health-care-monopoly-raises-drug-costs-consumers-pharmacists-say-pbms-prescription-cvs-united-cygna/8513593002/

The fallout of fake prices: Brands

- Price discrimination is a strategy that charges customers different prices for the same product based on what the seller thinks they can get the customer to agree to
- PBM and drug manufacturer negotiate a net price, but the extent to which that true net price is captured by the payer depends on the payer's access to information and negotiating leverage
- Hidden rebates are the key enabler allowing the drug supply chain to capture benefits of drug price discrimination



“Rebates” are just the tip of the iceberg

PHARMALOT

STAT+

Never mind the rebates. Maybe behind-the-scenes fees are boosting drug prices

By ED SILVERMAN @Pharmalot / AUGUST 16, 2018

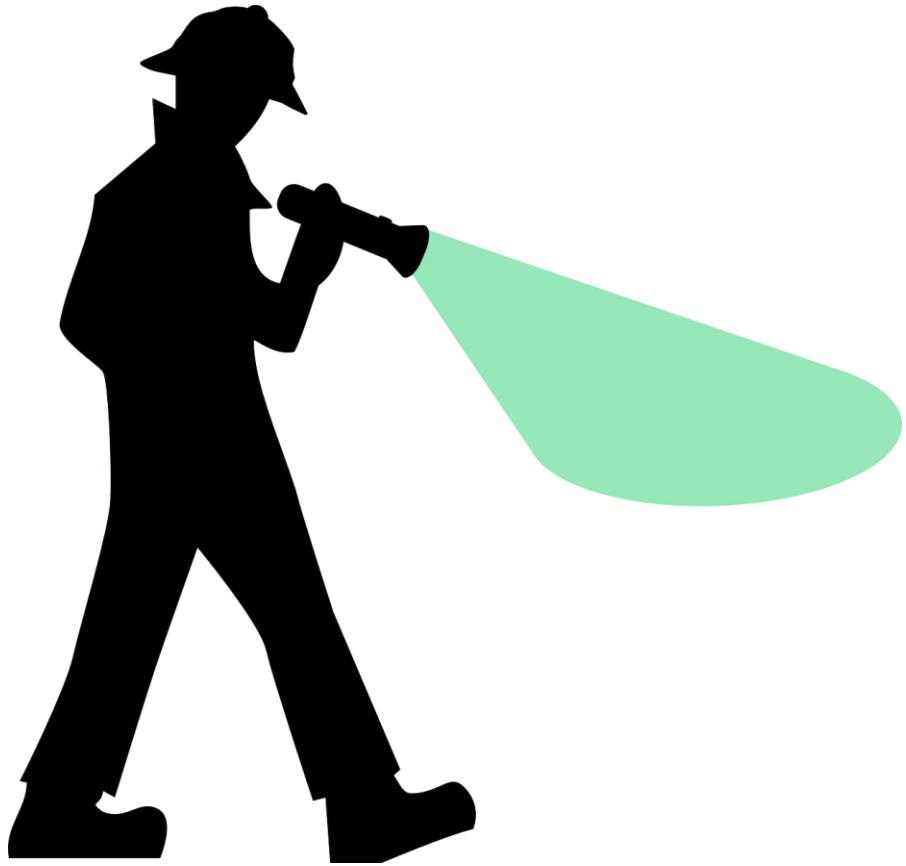
Reprints

ADOBE

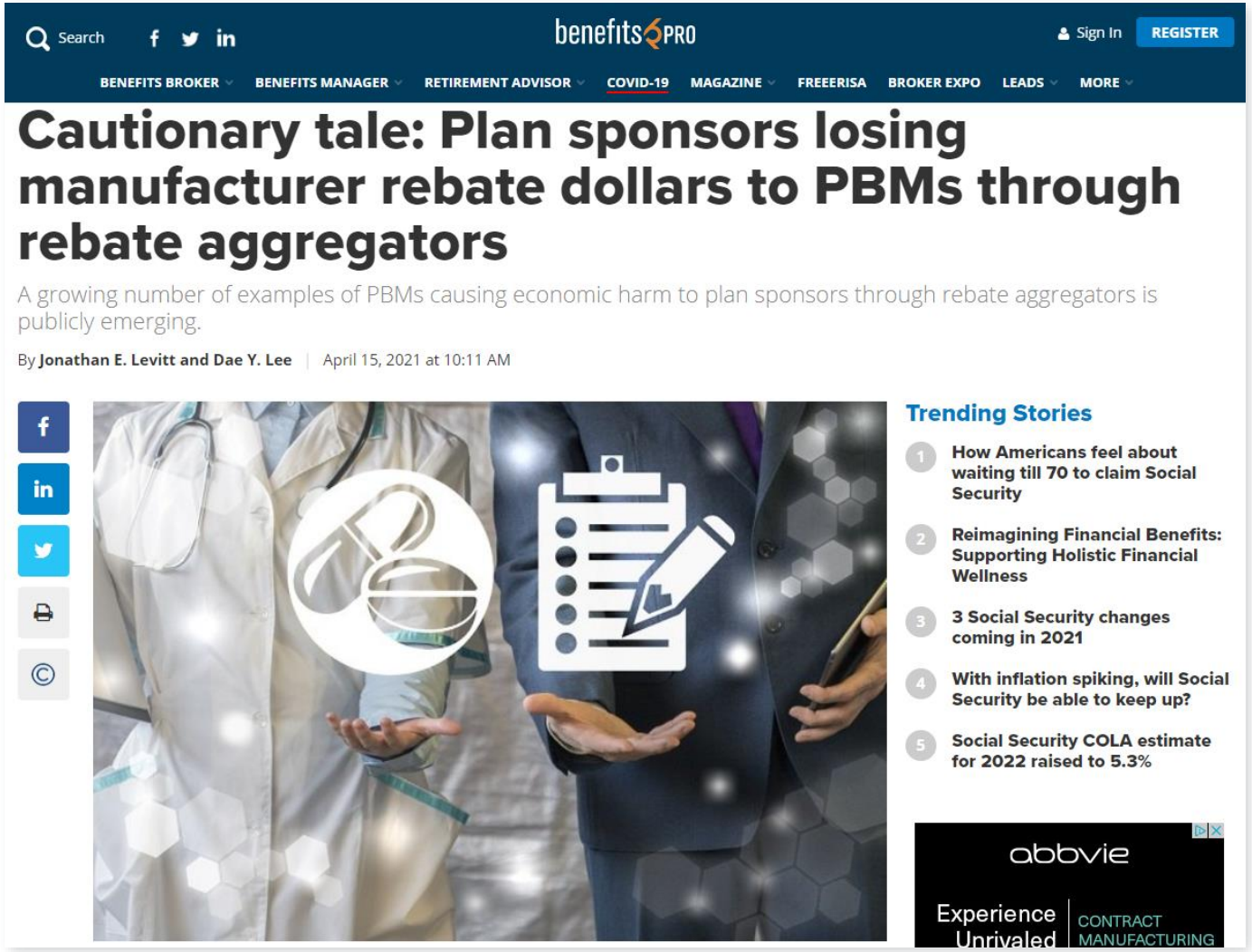
https://www.statnews.com/pharmalot/2018/08/16/rebates-fees-drug-prices/

“Rebates” are whatever the PBMs and insurers say they are

- As scrutiny has increased on the relation between rebates and higher list prices – and the degree with which those rebates are being passed on to patients and plan sponsors – PBMs and insurers have been recategorizing “rebates” and building new layers in the supply chain to hide the discounts from regulators and payers.



The rise of the rebate aggregators



https://www.benefitspro.com/2021/04/15/cautionary-tale-plan-sponsors-losing-manufacturer-rebate-dollars-to-pbms-through-rebate-aggregators/

How the “rebate” retention game works

- Rebate aggregators leverage the size of their managed population to extract price concessions from drug makers
  - The three largest PBMs all own or are affiliated with a rebate aggregator (CVS/Zinc, ESI/Ascent, Optum/Emisar)
- Rebate aggregators use the tools in the green box to reclassify and selectively share money received from pharma
  - Only a few of the manufacturer revenue categories are passed through to the PBM
- Clients get rebate guarantees, but on a meaningless per claim basis, which is impossible to audit back to the aggregator
  - An employer at best only has visibility into a few of the manufacturer revenue categories
- The higher list prices rise, the more price concessions a PBM can collect and retain

Pharma Revenue Category

- Standard Rebate Definition
- Incentive rebates categorized as mail-order purchase discounts
- Credits
- Market Share Incentives
- Promotional Allowances
- Commissions
- Market Share Utilization
- Drug pull-through programs
- Implementation Allowances
- Rebate Submission Fees
- Formulary Placement Fees
- Administrative Fees
- Inflation Caps/ Pricing Protection
- Price Concessions
- Performance-based Incentives
- Data Fees
- Volume-based Incentives

GPOs/Rebate aggregators in the news

PHARMALOT

STAT+

Express Scripts overcharged postal workers by $45 million, audit says

By Bob Herman and Ed Silverman July 22, 2024 Reprints

ANDREW CABALLERO-REYNOLDS/AFP VIA GETTY IMAGES

Express Scripts, one of the largest pharmacy benefit managers in the country, overcharged U.S. Postal Service employees by a whopping $45 million for their prescription drugs during a recent five-year period, according to a federal audit.

https://www.statnews.com/pharmalot/2024/07/22/express-scripts-overcharged-postal-workers-by-45-million-audit-says/

EXCLUSIVE

STAT+

CVS and its PBM agree to pay $45 million to Illinois for failing to pass drug rebates

By Ed Silverman July 23, 2024 Reprints

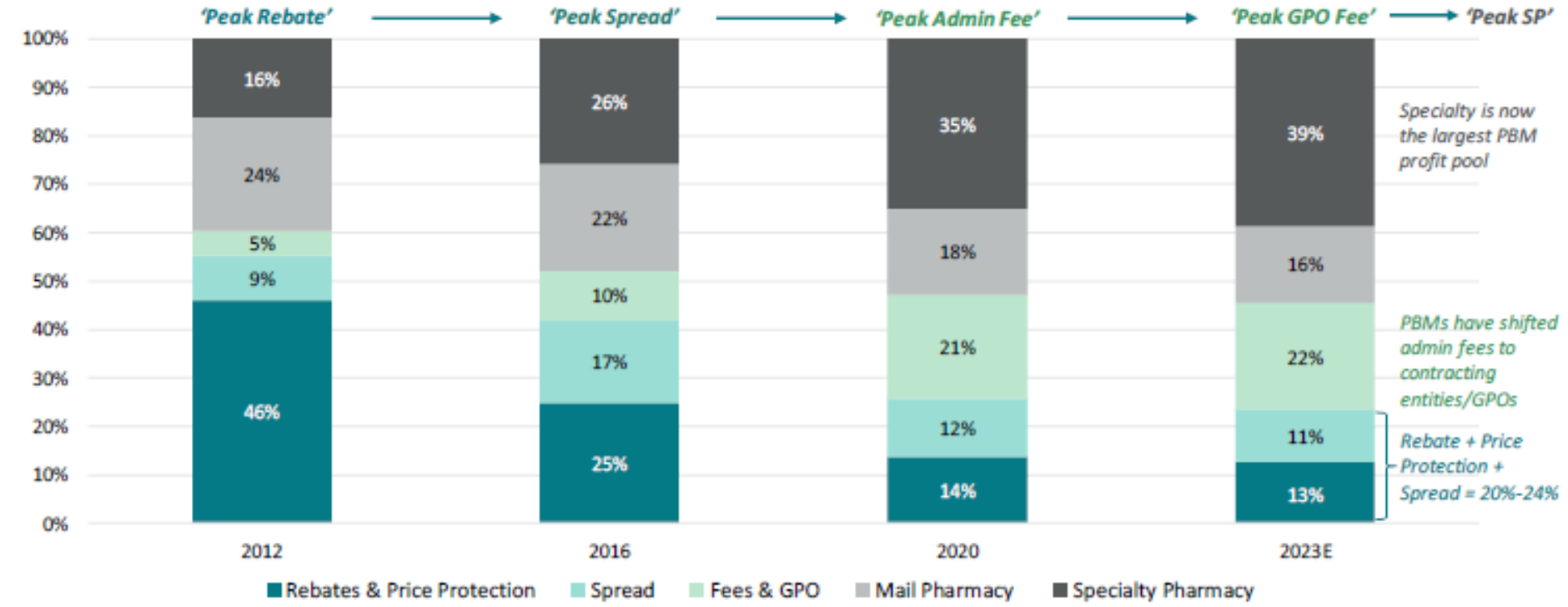
MATT ROURKE/AP

CVS Caremark, one of the largest pharmacy benefit managers in the country, agreed to pay at least $45 million to the state of Illinois to settle allegations that rebates were not passed through during a recent four-year period, according to a document obtained by STAT.

https://www.statnews.com/pharmalot/2024/07/23/cvs-caremark-pbm-illinois-medicines-rebates-ftc/

As “spread” and “rebate” scrutiny grows, PBM focus turns to fees and specialty

Fig. 1: Source of PBM Gross Profits Over Time: A Shift from Rebates and Spread to Fees and Specialty Pharmacy



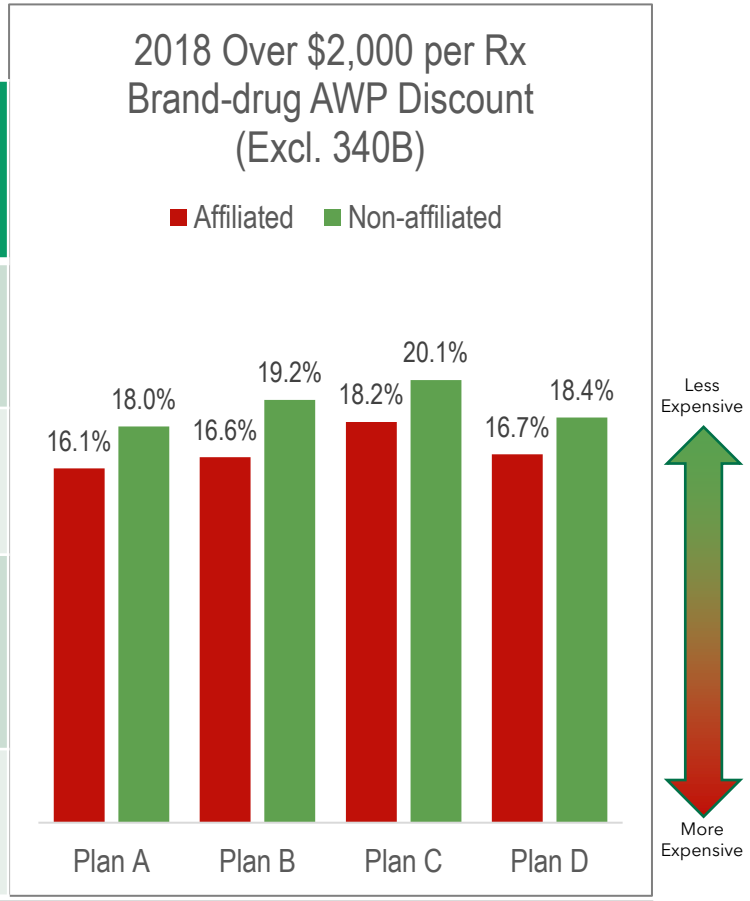
Source: Nephron Research PBM Gross Profit Model, August 2023

Source: https://nephronresearch.com/trends-in-profitability-and-compensation-of-pbms-and-pbm-contracting-entities/

The fallout of fake prices: Brand specialty drug differential pricing

Percentage of Brand Drug Claims Filled by Affiliated Pharmacy
Florida Medicaid Managed Care Claims Data (excl. 340B)

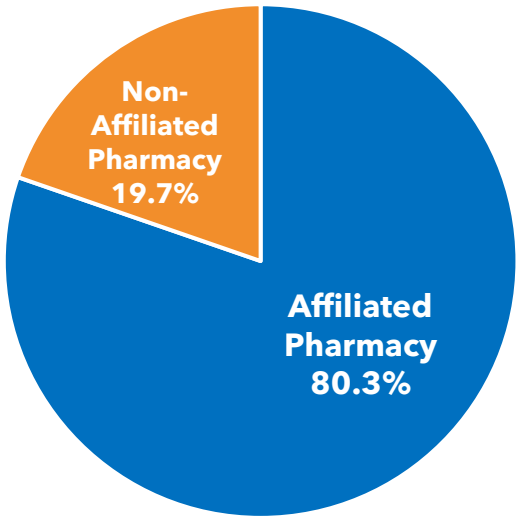
2018-19	Under $2,000 per Rx	Over $2,000 per Rx
Plan A	0.6%	60.2%
Plan B	0.4%	53.0%
Plan C	0.3%	18.2%
Plan D	0.2%	44.9%

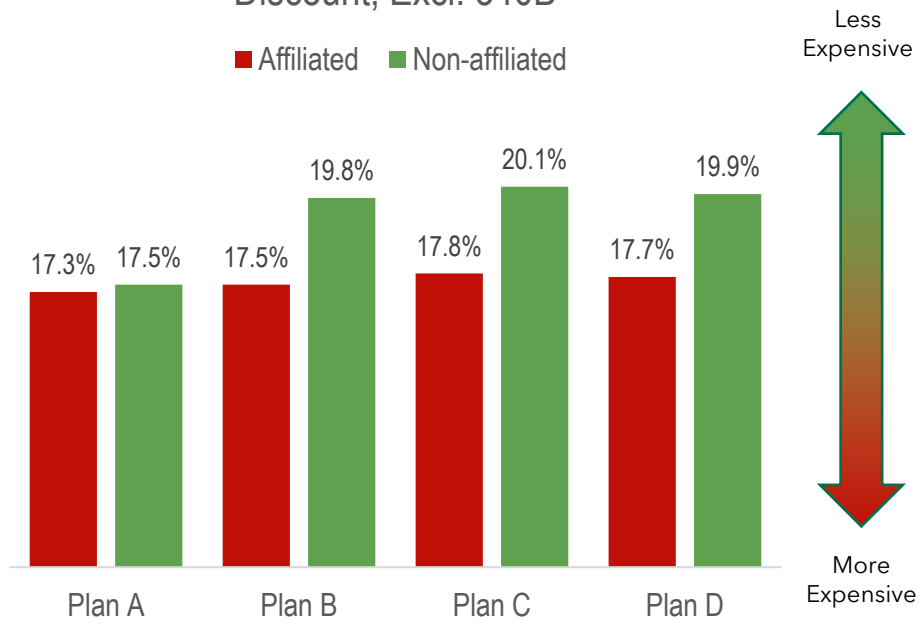


In Florida, specialty drugs are not only steered to affiliated pharmacies, but they are also more expensive at affiliated pharmacies!

https://www.3axisadvisors.com/projects/2020/1/29/sunshine-in-the-black-box-of-pharmacy-benefits-management

The fallout of fake prices: Humira differential pricing



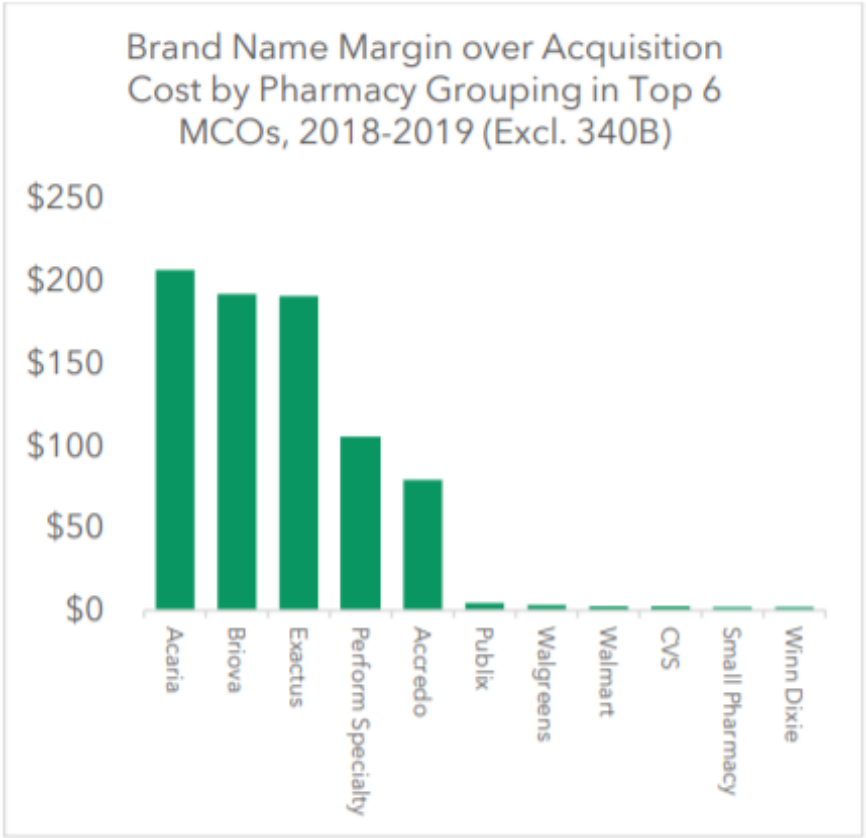


If Florida Medicaid would have recognized the non-affiliated pharmacy cost on the claims within the affiliated pharmacies, over $1.5 million in savings would have been realized on Humira alone.

https://www.3axisadvisors.com/projects/2020/1/29/sunshine-in-the-black-box-of-pharmacy-benefits-management

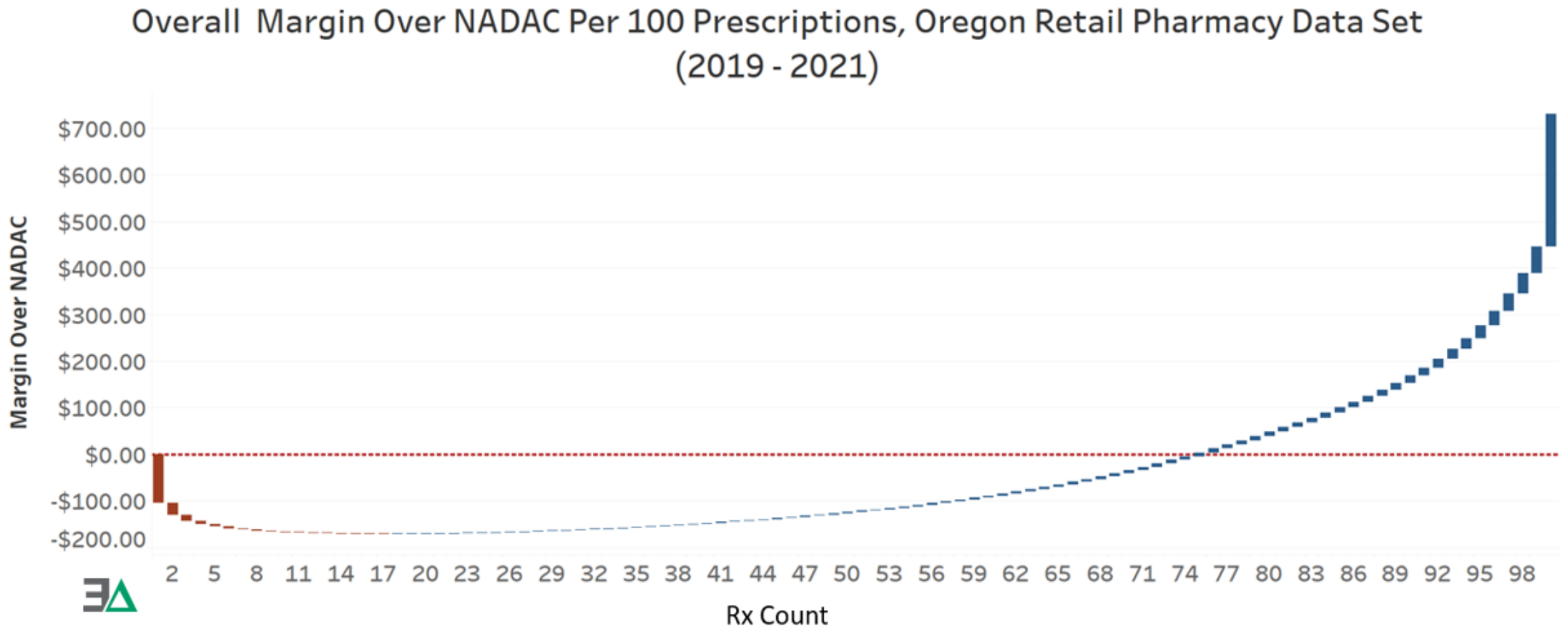
More on margin seeking: Florida Medicaid MCO specialty pharmacy experience highlights the distortions

- When comparing margins over NADAC in our Florida Medicaid analysis, it was overwhelmingly apparent that PBM-owned pharmacies received significantly more margin per prescription than traditional community pharmacies
  - Example: For Sunshine/Centene, 95% of all generic Gleevec 400 mg claims were filled at Acaria, Centene's wholly owned specialty pharmacy, at a Margin over NADAC of **$4,399 per claim**



https://www.3axisadvisors.com/projects/2020/1/29/sunshine-in-the-black-box-of-pharmacy-benefits-management

What Oregon taught us: The business of pharmacy is a casino



Source: https://www.3axisadvisors.com/projects/2022/10/27/understanding-pharmacy-reimbursement-trends-in-oregon

Losses are aplenty, but big scores determine profitability vs bankruptcy

- 18% of all claims are reimbursed below national average drug acquisition cost (NADAC)
- Pharmacies don't hit profitability until the 75th percentile of claims
- The 5% of claims with highest profits are responsible for 62% ($455 of $731) of pharmacies' total accumulated profit
- Meanwhile, the most profitable prescriptions (i.e. generic Gleevec, generic Tecfidera, generic Xeloda) are being disproportionately filled at PBM-affiliated pharmacies
- The losses are greatest in the Medicaid managed care programs.
- The margins are the highest in Medicare.

Source: https://www.3axisadvisors.com/projects/2022/10/27/understanding-pharmacy-reimbursement-trends-in-oregon

More on differential generic drug pricing & steering

- In Ohio, after spread pricing was eliminated and “pass-through” pricing was implemented in Medicaid, PBMs began overpaying pharmacies on specialty drugs, which PBMs tend to steer through their own pharmacies.
- This enabled PBMs to margin-shift dollars from spread to specialty medications filled at their affiliated pharmacies.
- These problems persist today, but are by no means unique to Ohio and by no means unique to Medicaid programs.

Special prices

CVS Caremark already was charging a healthy price markup in providing specialty prescription drugs to some Ohio pharmacies through the Medicaid program in 2018. But when the state removed the pharmacy benefit manager’s “spread pricing” revenue stream in 2019, the prices went way up — far above the National Average Drug Acquisition Cost maintained by the federal government. The move by CVS’ PBM presumably benefited the company greatly because it requires many specialty drugs to be bought from CVS’ own pharmacies. The prices below are per pill.

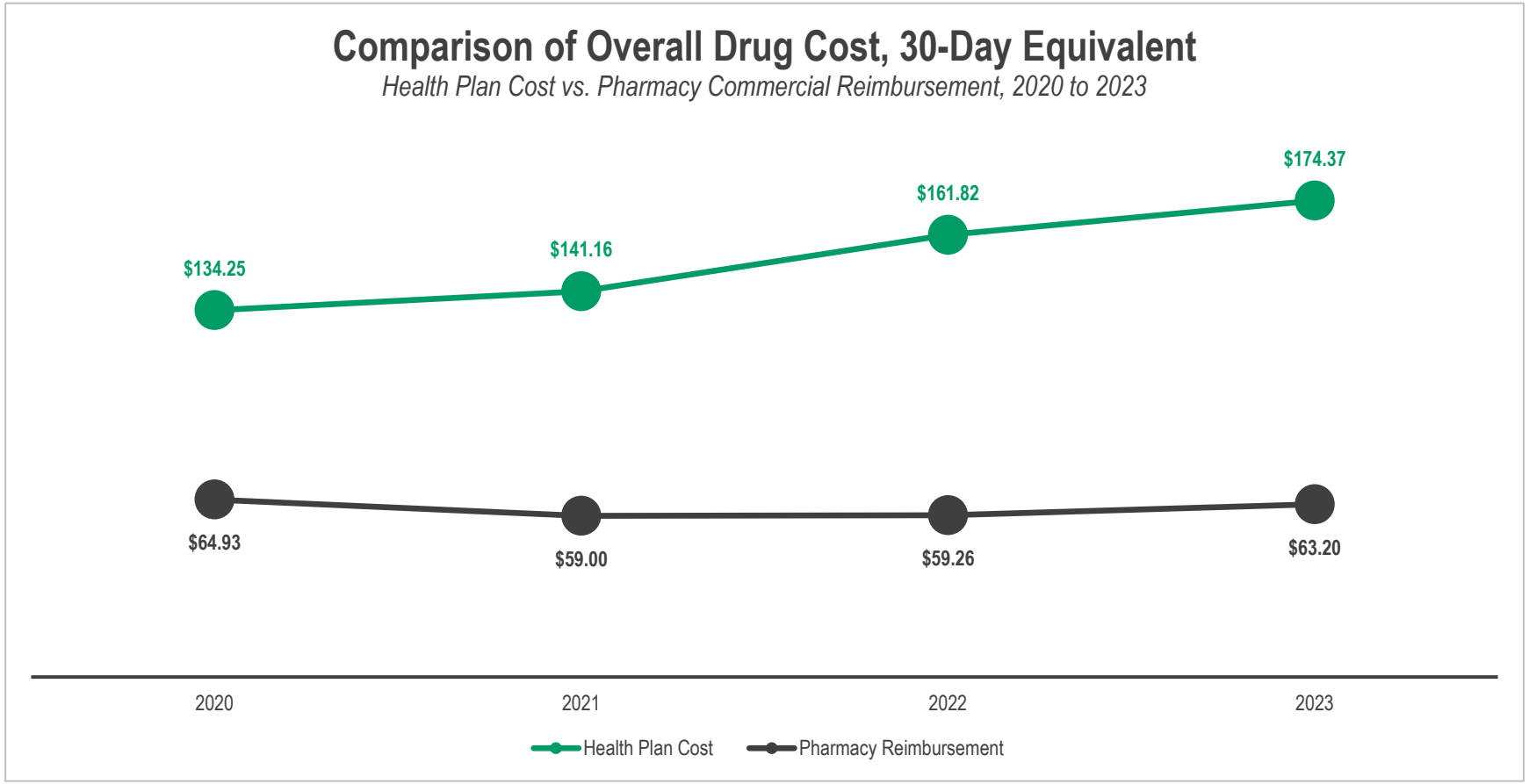
Specialty drug	2018 price for Ohio	2018 US avg price	2018 markup	2018 % markup	2019 price for Ohio	2019 US avg price	2019 markup	2019 % markup
SILDENAFIL 20 MG TABLET	$3.45	$0.24	$3.21	1,338%	$3.90	$0.16	$3.74	2,338%
IMATINIB MESYLATE 400MG TAB	$120.00	$83.00	$37.00	45%	$270.00	$14.50	$255.50	1,762%
ENTECAVIR 0.5 MG TABLET	$5.70	$4.21	1.49	35%$	30.00$	1.86	$28.14	1,513%
CAPECITABINE 500 MG TABLET	$7.40	$5.40	$2.00	37%	$29.00	$3.33	$25.67	771%
TACROLIMUS 5 MG CAPSULE	$2.20	$2.86	$(0.66)	-23%	$3.50	$1.52	$1.98	130%
OTEZLA 30 MG TABLET	$51.00	$49.88	$1.12	2%	$58.00	$54.75	$3.25	6%

SOURCE: DISPATCH ANALYSIS OF MEDICAID PRESCRIPTION DATA FROM SOME THREE DOZEN OHIO PHARMACIES

Reference: https://www.46brooklyn.com/research/2019/4/21/new-pricing-data-reveals-where-pbms-and-pharmacies-make-their-money; https://www.dispatch.com/news/20190430/ohio-medicaid-officials-to-crack-down-on-pbm-specialty-drug-practice

Overall Washington commercial Rx cost trends

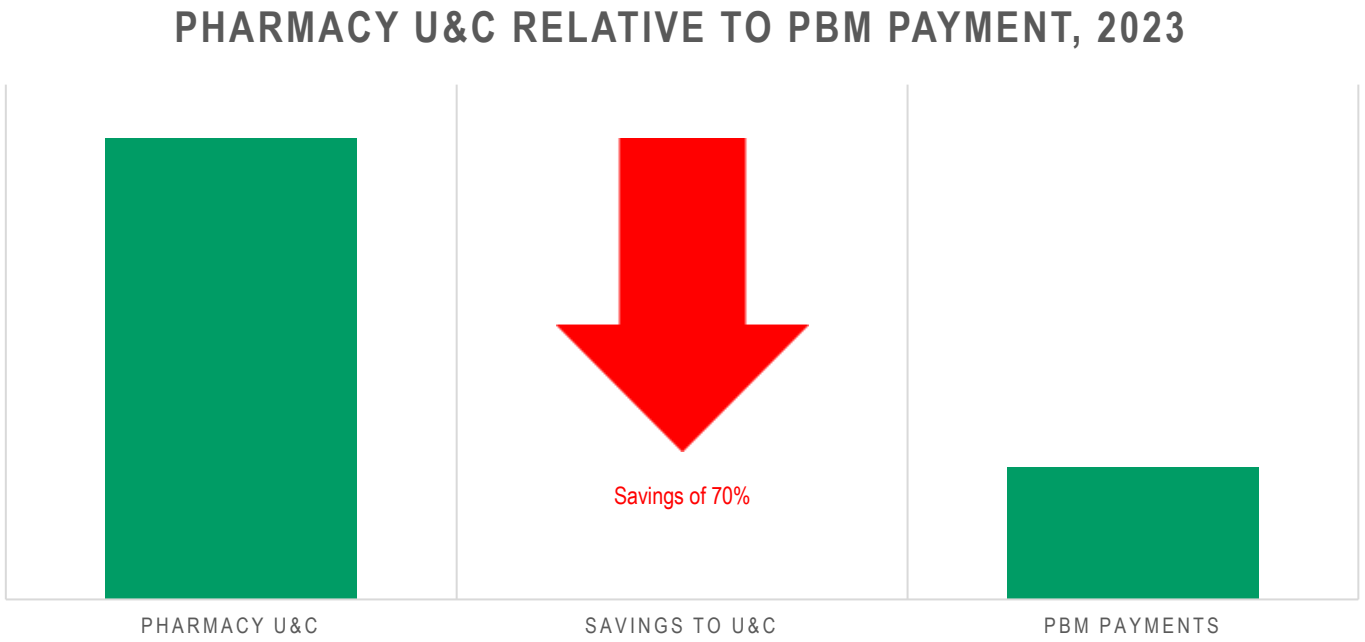
- Plan sponsor costs increased 30% over the four-year period.
- Pharmacy reimbursement decreased by 3% over the same timeframe.



Source: https://www.3axisadvisors.com/projects/2024/6/25/understanding-drug-pricing-from-divergent-perspectives-state-of-washington-prescription-drug-pricing-analysis-jh92

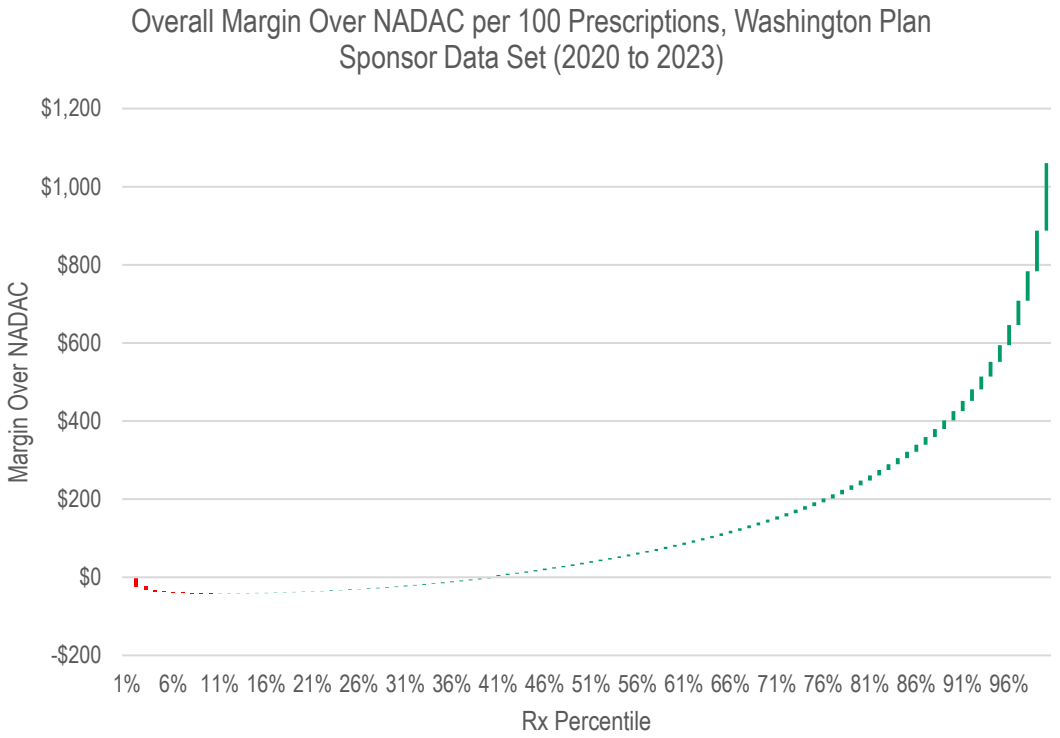
PBMs appear to save plan sponsors big bucks relative to pharmacy sticker prices

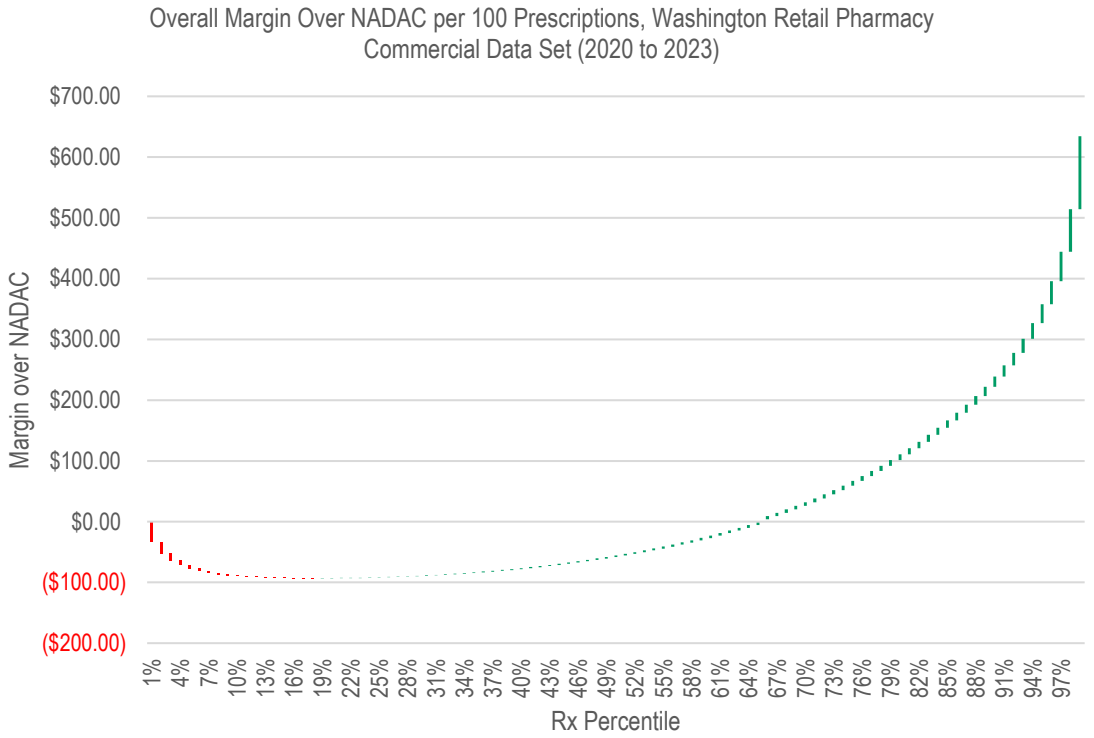
- While pharmacies charge inflated usual & customary prices, PBMs are negotiating 70% discounts relative to those pharmacy sticker prices.



Source: https://www.3axisadvisors.com/projects/2024/6/25/understanding-drug-pricing-from-divergent-perspectives-state-of-washington-prescription-drug-pricing-analysis-jh92

Overall margin over NADAC per 100 prescriptions, plan sponsor vs retail pharmacy data sets





Source: https://www.3axisadvisors.com/projects/2024/6/25/understanding-drug-pricing-from-divergent-perspectives-state-of-washington-prescription-drug-pricing-analysis-jh92

Looking at the brand drugs with the highest mark-ups over NADAC in Washington

- Of the top 10 most "upcharged" brand drugs to studied plan sponsors, our studied pharmacies only filled one of those products.

Rank	Product Name	Median Cost Above NADAC	Observed Retail Pharmacy Claim
1	Ingrezza Oral Capsule 80 MG	$985.58	X
2	Gleevec Oral Tablet 400 MG	$961.63	X
3	Sutent Oral Capsule 25 MG	$842.16	X
4	Tarceva Oral Tablet 25 MG	$573.06	X
5	Austedo Oral Tablet 12 MG	$548.66	X
6	Sprycel Oral Tablet 100 MG	$468.62	X
7	Copaxone Subcutaneous Solution Prefilled Syringe 20 MG/ML	$467.55	X
8	Skyrizi Pen Subcutaneous Solution Auto-injector 150 MG/ML	$445.93	X
9	Stribild Oral Tablet 150-150-200-300 MG	$403.32	✓
10	Kaletra Oral Tablet 200-50 MG	$375.90	X

Source: https://www.3axisadvisors.com/projects/2024/6/25/understanding-drug-pricing-from-divergent-perspectives-state-of-washington-prescription-drug-pricing-analysis-jh92

Looking at the brand drugs with the highest mark-ups over NADAC vs study retail pharmacy experience

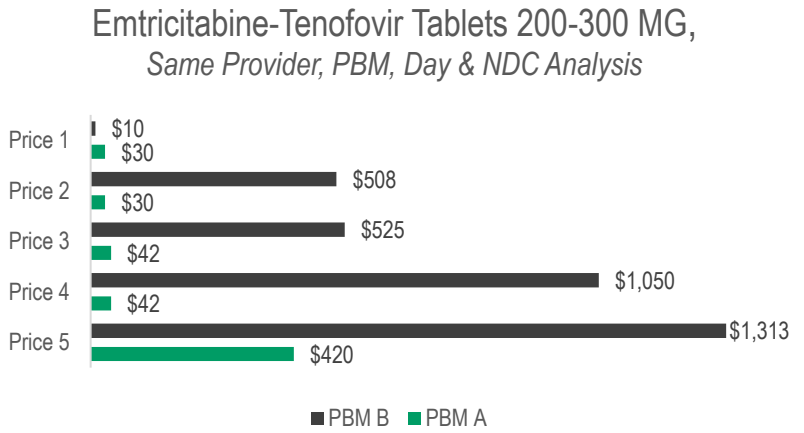
- For the five “highly upcharged” brand drugs that we can compare, pharmacies are often being paid hundreds of dollars below the health plan’s recognized cost

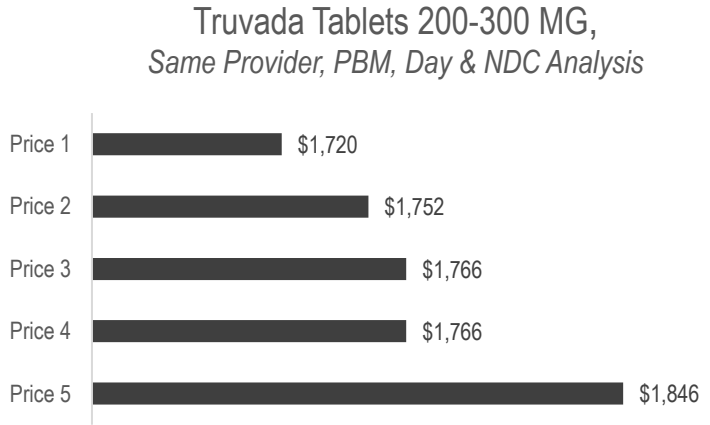
Product Name	Pharmacy Average Reimbursement Above NADAC	Delta to Plan Sponsor
Stribild Oral Tablet 150-150-200-300 MG	$313.45	-$89.87
Neupro Transdermal Patch 24 Hour 4 MG/24HR	$22.95	-$167.91
Invega Sustenna Intramuscular Suspension Prefilled Syringe 156 MG/ML	-$32.25	-$199.32
Topamax Oral Tablet 100 MG	$37.77	-$107.91
Atripla Oral Tablet 600-200-300 MG	-$46.27	-$191.35

Source: https://www.3axisadvisors.com/projects/2024/6/25/understanding-drug-pricing-from-divergent-perspectives-state-of-washington-prescription-drug-pricing-analysis-jh92

PBM payments to pharmacies are often inconsistent

- Our study found several instances where the same PBM, paid the same provider, on the same day, for the same drug, significantly different rates.

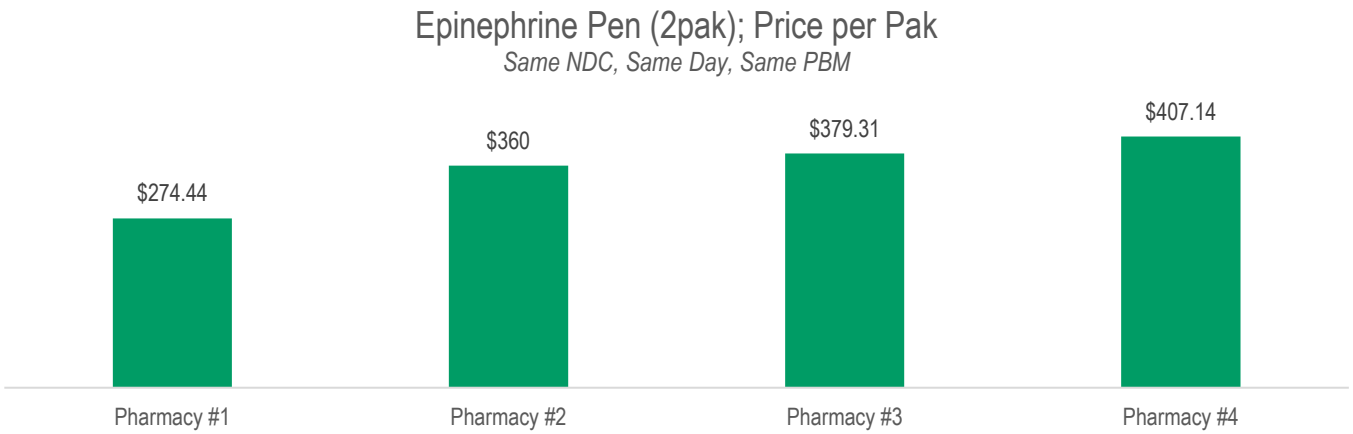


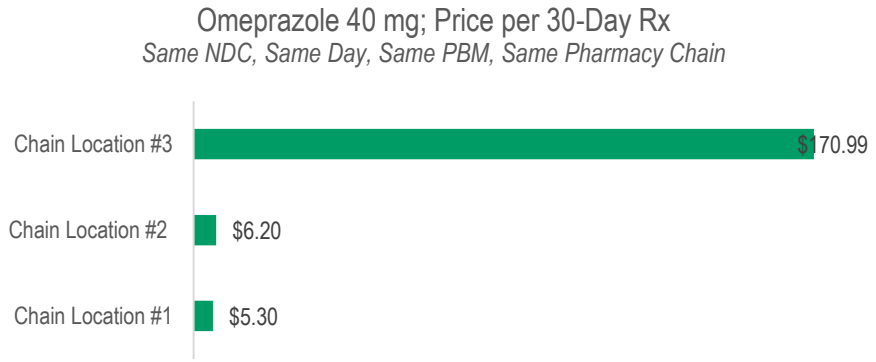


Source: https://www.3axisadvisors.com/projects/2024/6/25/understanding-drug-pricing-from-divergent-perspectives-state-of-washington-prescription-drug-pricing-analysis-jh92

Much like PBM payments to pharmacies, PBM charges to plan sponsors are often inconsistent

- Our study found several instances where the same PBM, paid the same provider, on the same day, for the same drug, significantly different rates.





Source: https://www.3axisadvisors.com/projects/2024/6/25/understanding-drug-pricing-from-divergent-perspectives-state-of-washington-prescription-drug-pricing-analysis-jh92

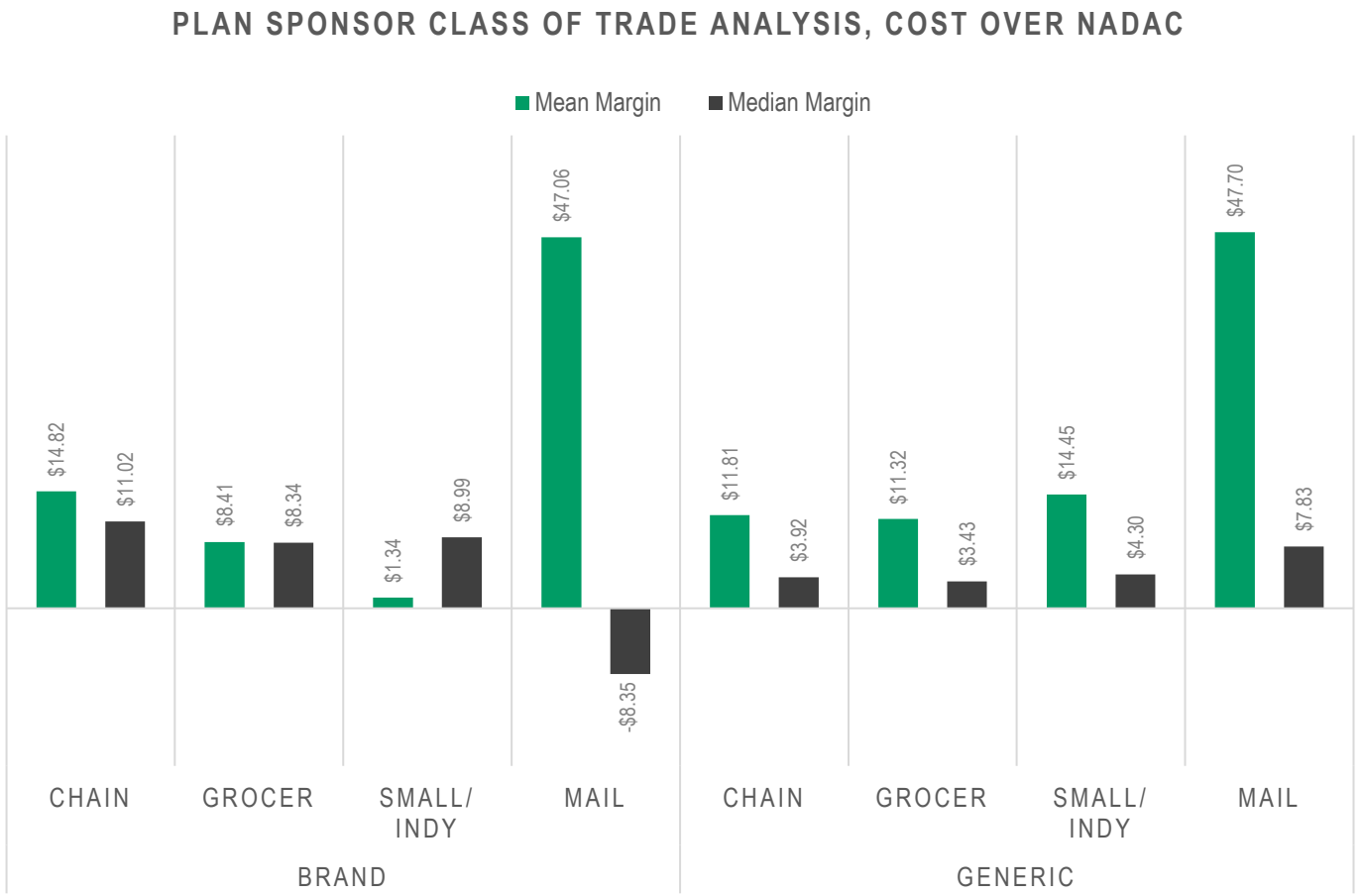
Spread pricing sub-analysis: Quantifying the total impact

- Because claims where the plan sponsor is being 'upcharged' relative to the pharmacy provider's reimbursement outnumber the opposite by about 2-to-1, and because brand claims are only roughly 10% of overall utilization, the plan sponsor is consistently getting charged more than the pharmacy provider's reimbursement within our sub-analysis of matched claims.
- The plan sponsor saved approximately $35,000 on the claims where their costs were lower than pharmacy reimbursement; however, these savings were not sufficiently off-set as their costs were $200,000 higher when their cost exceeded pharmacy reimbursement.
- Taking an aggregate plan sponsor view on spread claims results in the plan sponsor costs being approximately $165,000 higher than the reimbursement provided to pharmacy providers (approximately **$8 more per prescription**).

Source: https://www.3axisadvisors.com/projects/2024/6/25/understanding-drug-pricing-from-divergent-perspectives-state-of-washington-prescription-drug-pricing-analysis-jh92

Examining pharmacy costs and reimbursements based on class of trade

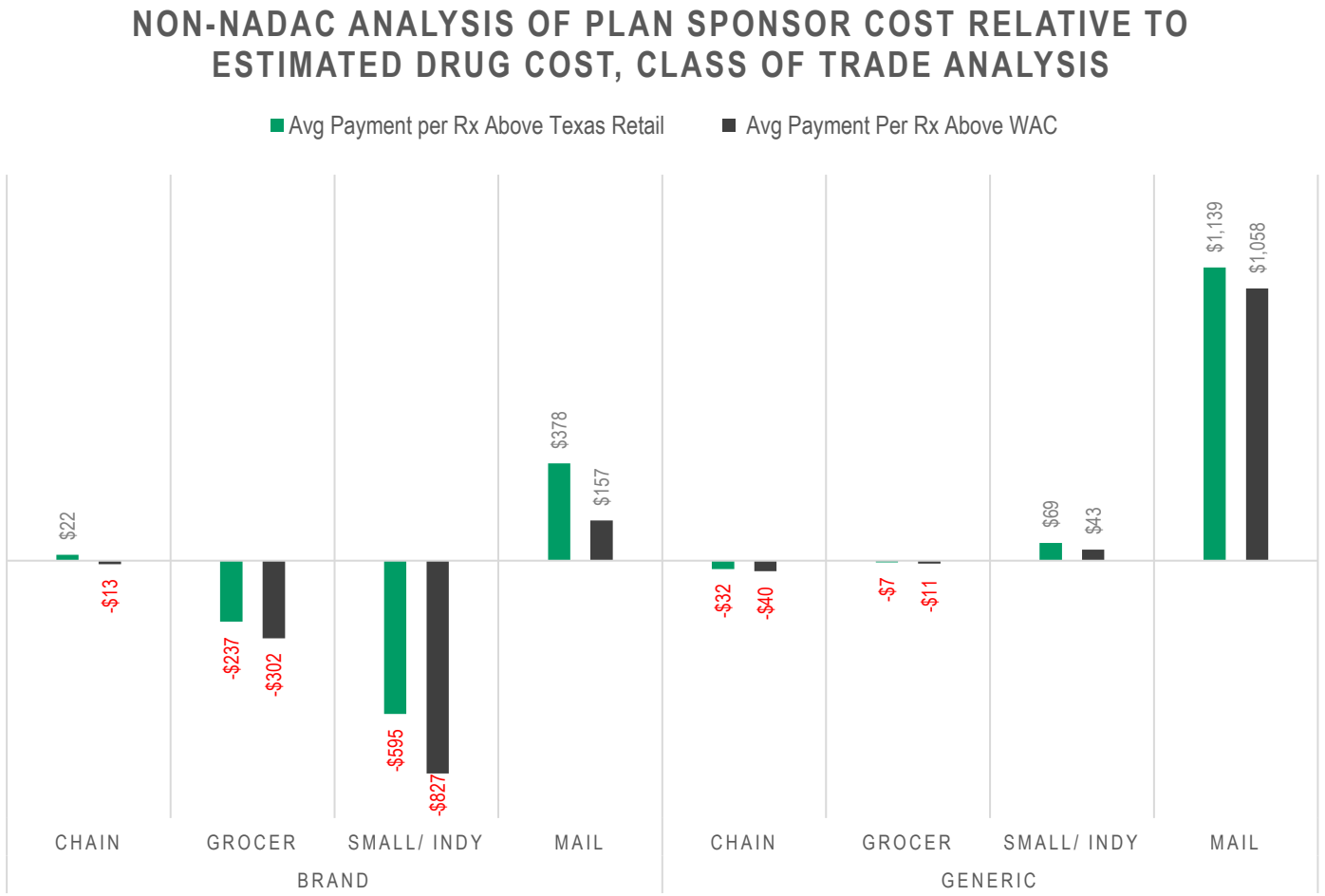
- Retail pharmacies are generally positioned worse to their PBM-affiliated mail-order pharmacy competitors within the reviewed health plan sponsor data.
- For 97% of the claims in our plan sponsor data covering drugs typically dispensed at retail, mail-order pharmacy margins were more than three times higher than retail pharmacies.



Source: https://www.3axisadvisors.com/projects/2024/6/25/understanding-drug-pricing-from-divergent-perspectives-state-of-washington-prescription-drug-pricing-analysis-jh92

Non-NADAC drugs sub-analysis

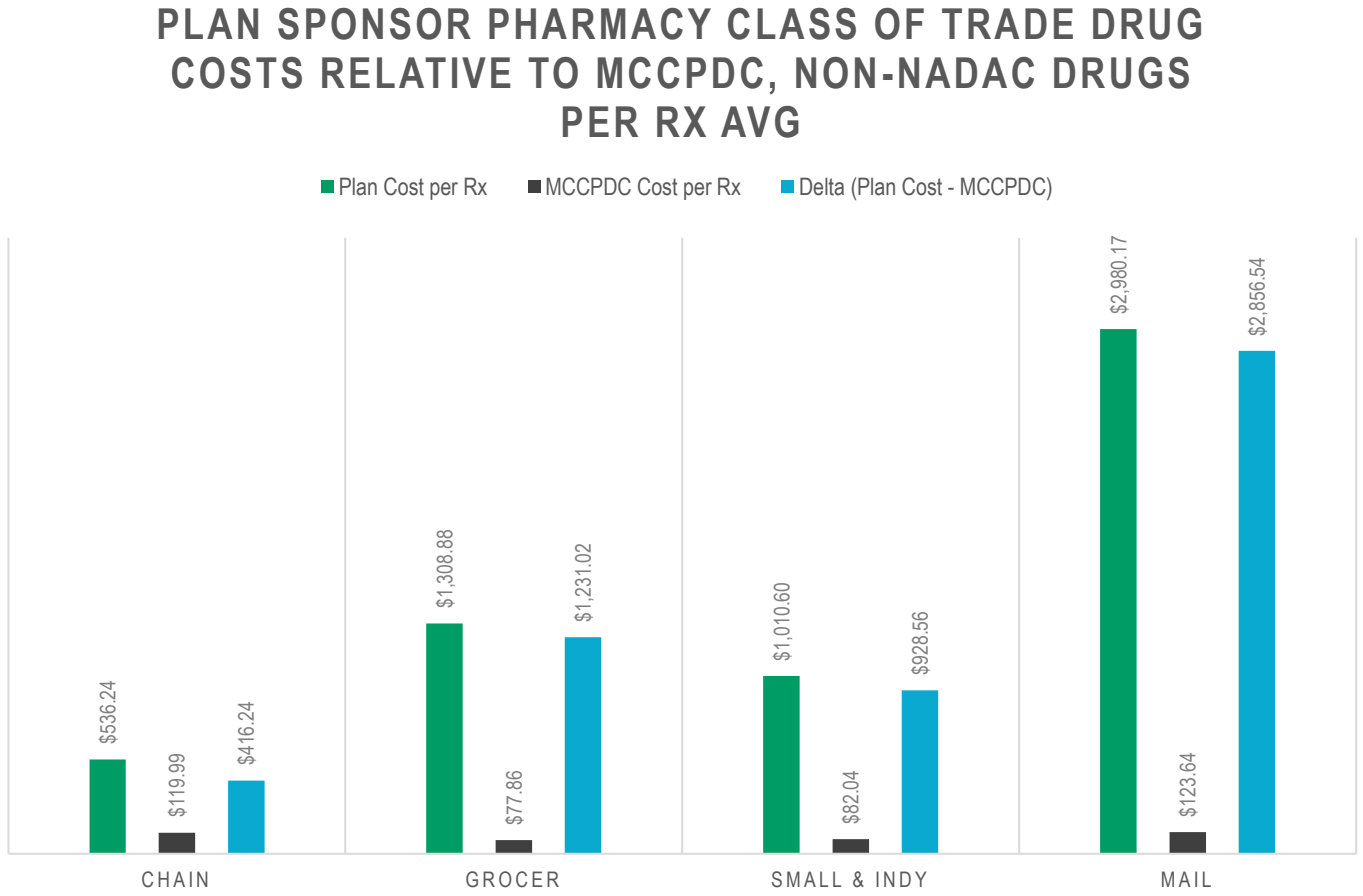
- PBM pricing to the studied health plan sponsors suggests PBM generic drug cost management within each class of trade was relatively close to the underlying drug's cost, as estimated by either the Texas Medicaid retail price or the drug's WAC, with the exception of mail-order pharmacies.



Source: https://www.3axisadvisors.com/projects/2024/6/25/understanding-drug-pricing-from-divergent-perspectives-state-of-washington-prescription-drug-pricing-analysis-jh92

Non-NADAC drugs sub-analysis: Mark Cuban Cost Plus Drugs comparison

- Mail-order pharmacies yielded margins relative to MCCPDC prices that were 586% higher than those received by chain pharmacies.
- Washington plan sponsors were charged 2,291% more for non-NADAC drugs than what could have been achieved through alternative mail-sourcing at Mark Cuban Cost Plus Drug Company.

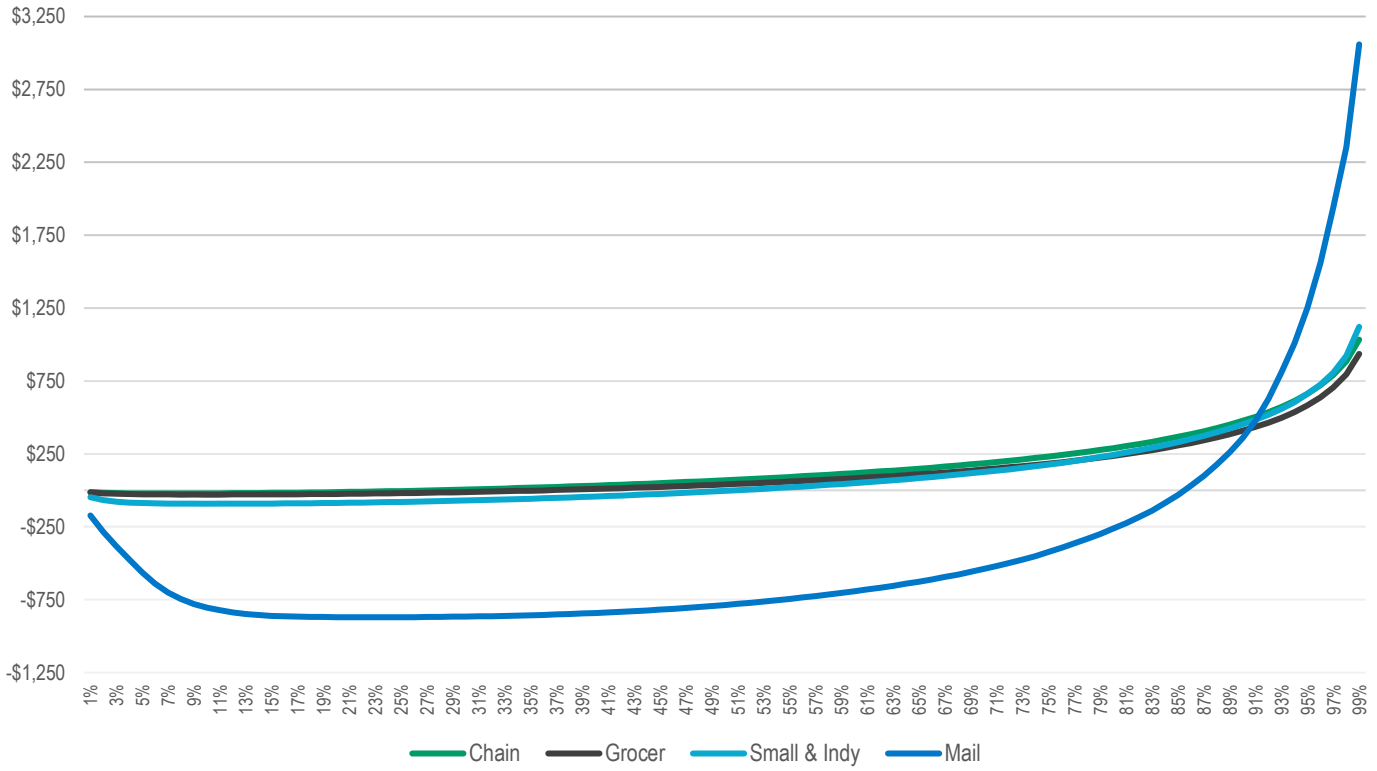


Source: https://www.3axisadvisors.com/projects/2024/6/25/understanding-drug-pricing-from-divergent-perspectives-state-of-washington-prescription-drug-pricing-analysis-jh92

How PBMs lose – and make – their money

- The last 5% of claims within the mail-order pharmacy experience are responsible for 73% of all the plan sponsor costs above NADAC for mail claims (in comparison to that same last 5% of claims being just ~50% of costs above NADAC for the other channels).

OVERALL MARGIN OVER NADAC PER 100 PRESCRIPTIONS,
WASHINGTON COMMERICAL PLAN SPONSOR DATA SET BY RX CLASS OF TRADE,
2020 TO 2023



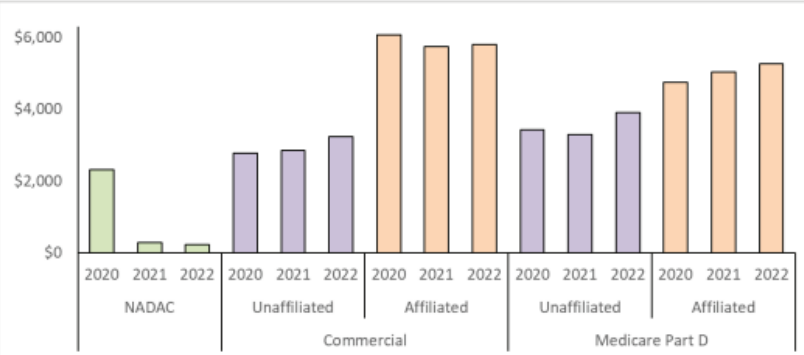
Source: https://www.3axisadvisors.com/projects/2024/6/25/understanding-drug-pricing-from-divergent-perspectives-state-of-washington-prescription-drug-pricing-analysis-jh92

Incentives drive outcomes

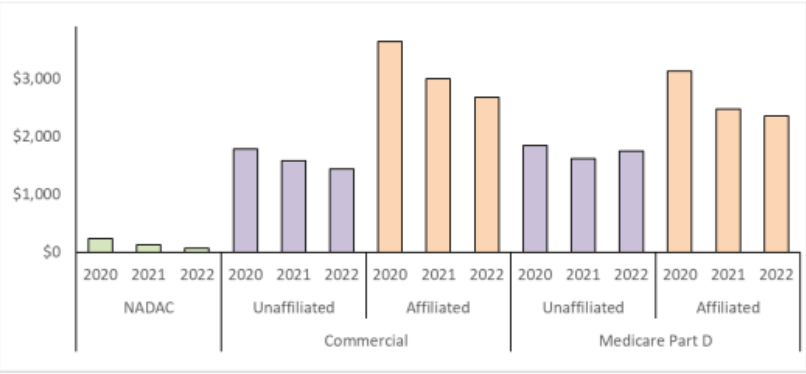
- 2024 FTC report shows significant markups on specialty drugs that far eclipse payments to non-affiliated pharmacies
- Internal documents from PBM parent companies lament the “optics” of charging $19,200 for a drug that could have been purchased for $97 at Costco
- The report also showed that PBMs will often loosen eliminate prior authorization requirements for prescriptions filled at PBM-affiliated pharmacies

Figure 11. Gross Pharmacy Reimbursement Rates For a One-Month Supply of Two Specialty Generics Paid to PBM-Affiliated and Unaffiliated Pharmacies By Commercial and Medicare Part D Plans and Members Managed By the Big 3 PBMs, and NADAC, 2020-2022[200]

A. Abiraterone Acetate (generic Zytiga for prostate cancer)



B. Imatinib Mesylate (generic Gleevec for leukemia)



Sources: https://www.ftc.gov/system/files/ftc_gov/pdf/pharmacy-benefit-managers-staff-report.pdf

PBM Reform: The treatments

- As scrutiny over rebate capture, spread pricing, and DIR fees increased, public policy adjustments emerged.
  - During his first term, Donald Trump proposed eliminating rebates altogether.
  - A number of states like Ohio banned spread pricing in Medicaid.
  - Retroactive DIR fees were prohibited in Medicare.

Trump, Donald. July 24, 2020. Trump White House Archives. *Executive Order on Lowering Prices for Patients by Eliminating Kickbacks to Middlemen.* https://trumpwhitehouse.archives.gov/presidential-actions/executive-order-lowering-prices-patients-eliminating-kickbacks-middlemen/
Kasler, Karen. August 14, 2018. Statehouse News Bureau. *Ohio Medicaid Orders Managed Care Plans To Break Contracts With PBMs Using "Spread Pricing".* https://www.statenews.org/government-politics/2018-08-14/ohio-medicaid-orders-managed-care-plans-to-break-contracts-with-pbms-using-spread-pricing
American Pharmacists Association. *CMS eliminates retroactive DIR fees.* https://www.pharmacist.com/Advocacy/Issues/CMS-Eliminates-Retroactive-DIR-Fees

PBM Reform: Conditions evolve

- Just when you think you have the answers, PBMs change the questions.
  - New pricing logistics emerge as a mechanism to subvert policy reforms
- As Trump proposed repealing the safe harbor to anti-kickback laws that allowed drugmaker-to-PBM rebates:
  - PBMs had already begun relabeling drugmaker compensation as various fees
  - PBM parent companies began launching group purchasing organizations (AKA rebate aggregators) that now stand inbetween drugmakers and PBMs, creating a new layer where discounts can be stowed away without being passed through to plans/patients

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Silverman, Ed. August 16, 2018. Stat News. *Never mind the rebates. Maybe behind-the-scenes fees are boosting drug prices.* https://www.statnews.com/pharmalot/2018/08/16/rebates-fees-drug-prices/
Levitt, Jonathan; Lee, Dae. April 15, 2021. Benefits Pro. *Cautionary tale: Plan sponsors losing manufacturer rebate dollars to PBMs through rebate aggregators.* https://www.benefitspro.com/2021/04/15/cautionary-tale-plan-sponsors-losing-manufacturer-rebate-dollars-to-pbms-through-rebate-aggregators/

PBM Reform: Conditions evolve

- As states moved to prohibit spread pricing:
  - PBMs shifted to aggregate effective rate reconciliations (AKA clawbacks), which in essence overpay pharmacies relative to contract guarantees, leaving excess paid amounts that can be clawed back at a later date
  - PBMs increased transaction fees on pharmacies, again leaning into other mechanisms to create distance between net paid amounts and billed amounts

Candisky, C. “CVS Caremark hitting pharmacists with fee increase.” The Columbus Dispatch. Available from: https://stories.usatodaynetwork.com/sideeffects/cvs-caremark-hitting-pharmacists-fee-increase/
Rowland, D. “I just see fraud all over this: Insiders detail how clawbacks drive up drug prices, hurt pharmacies.” The Columbus Dispatch. July 15, 2024. Available from: https://www.dispatch.com/story/news/2021/07/15/prescription-drug-clawbacks-pharmacy-benefit-managers-ohio/7817914002/

PBM Reform Tailwinds

- In 2023 and 2024, PBMs faced their highest degrees of scrutiny ever, and the momentum for reform is strong. Some recent highlights:
  - Multiple investigations from state attorneys general
  - A growing number of states firing and reshaping their legacy PBM arrangements
  - Many pieces of congressional legislation with several committees of jurisdiction scrutinizing the marketplace and proposing broad reforms
  - Federal Trade Commission investigations
  - Revamped direct and indirect remuneration (DIR) model in Medicare Part D in 2024
  - Unprecedented pressure from employer groups

PBM Reform Tailwinds

- While there are a number of pieces of legislation aiming to realign the PBM marketplace, some common policy themes are:
  - Increased transparency
  - Prohibiting spread pricing
  - Ensuring rebates are passed through to end payers
  - Delinking PBM compensation from the list prices of medicines
  - Limiting patient steering and mandatory mail-order
  - Capping patient cost sharing

Strategies for repairing PBM misaligned incentives

- Medicaid “carve-outs” or single PBM w/ objective pricing benchmarks
- Pass-through pricing, full transparency
- Prohibitions on patient steering
- Bans on spread pricing
- Bans on gag clauses and co-pay clawbacks
- Share the savings – pushing rebates to patients/plan sponsors
- Reverse auctions
- Fiduciary requirements

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