Rebates and Drug Price Increases: An Analysis

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Drug prices have been the subject of intense interest among policymakers in Washington. Anecdotes of patients paying thousands of dollars per month for critical medicines, while the exception rather than the rule, have captured headlines and concerned politicians in both parties. In the search for solutions, Congress has recently focused on pharmacy benefit managers (PBMs).

Some claim that the rebates PBMs negotiate on behalf of health insurance companies and large employers adversely affect the list prices set by drug manufacturers. If this is true, the list prices of rebated drugs and non-rebated drugs would be changing at different rates. To explore whether this can be observed in the data, this report looks at a set of drugs with the largest price hikes and evaluates whether those drugs are rebated or non-rebated.

Background

PBMs' role in the healthcare system is to manage prescription drug coverage for health insurance companies and large employers. An important part of PBMs' work on behalf of their clients is negotiating with drug manufacturers for rebates, particularly when a brand drug faces competition from another brand drug. In exchange for rebates, manufacturers receive preferred status on PBM drug formularies, which are carefully constructed drug lists that guide patients to cost-effective, clinically appropriate medicines. The savings that accrue from these concessions result in lower health insurance premiums for employers and beneficiaries.

In the last several years, policymaker attention has turned to PBMs amid accusations about their practices. The Federal Trade Commission, the government agency in charge of ensuring that industries remain competitive, is preparing a report on the PBM industry. But in the meantime, Congress and others have proposed various limits on the way PBMs operate, particularly targeting the rebates that PBMs negotiate on behalf of their customers. These limits are not well considered and would have negative unintended consequences for patients, taxpayers, and the healthcare system.[1]

In a previous analysis looking at the relationship between rebates and drug prices, we compared a group of rebated drugs with a group of non-rebated drugs—that is, a group of drugs with manufacturer rebates and a group without rebates, respectively. This analysis found that price increases in the two groups were generally comparable.[2] In other words, there was no evidence that rebates are associated with rising list prices. To provide an additional perspective on this question, we present here a new analysis that looks at individual drugs and whether those with the highest list price increases are rebated or non-rebated.

Drugs without rebates comprise **9 of the top 10 drugs** with the largest price increases.

Analysis

To examine the role of rebates among drugs with the biggest price hikes, we construct a dataset of drugs that we determine, using the following methodology, to be either rebated or non-rebated.

METHODOLOGY

To identify and differentiate between rebated and non-rebated drugs, we analyze the 2018–2023 formularies of the three largest PBMs (CVS Caremark, Express Scripts, and OptumRx). Our dataset comprises pharmacy benefit drugs (in Medicare, this is known as Part D coverage).

We consider a drug to be likely rebated if it is included on at least one of the three formularies for every year and likely non-rebated if it is excluded from or not preferred on at least one formulary for every year. We include only single-source drugs, which do not have therapeutically equivalent (that is, generic or biosimilar) versions. (A more detailed description of the methodology and criteria we employ in our sample construction is available in the appendix.)

For the identified drugs, we pull wholesale acquisition cost (WAC) data from Medi-Span Price Rx for 2018–2023 and calculate the average WAC for each drug for each year. Finally, we rank our sample by the percentage change observed over the period.

RESULTS

We focus on a subset of our sample, the top quintile, for which we observe the largest percent increase in WAC. We identify 29 drugs in this subsample—13 rebated and 16 non-rebated.[3] Non-rebated drugs comprise 9 of the top 10 drugs, 11 of the top 15 drugs, and 16 of the top 25 drugs. Among the non-rebated drugs, price increases ranged from 40 percent to more than 400 percent. Among rebated drugs, price increases ranged from 38 percent to 56 percent. (See **Figure 1**.) Among rebated drugs, the mean and median increase in list price was 44 percent. Among non-rebated drugs, list price hikes were 93 percent (mean) and 58 percent (median).

FIGURE 1. RANGE OF PRICE INCREASES AMONG REBATED AND NON-REBATED DRUGS

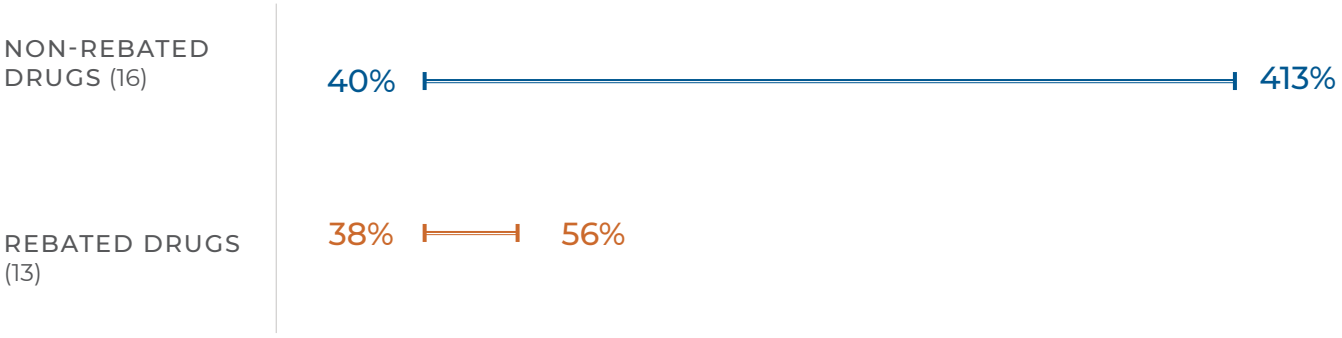
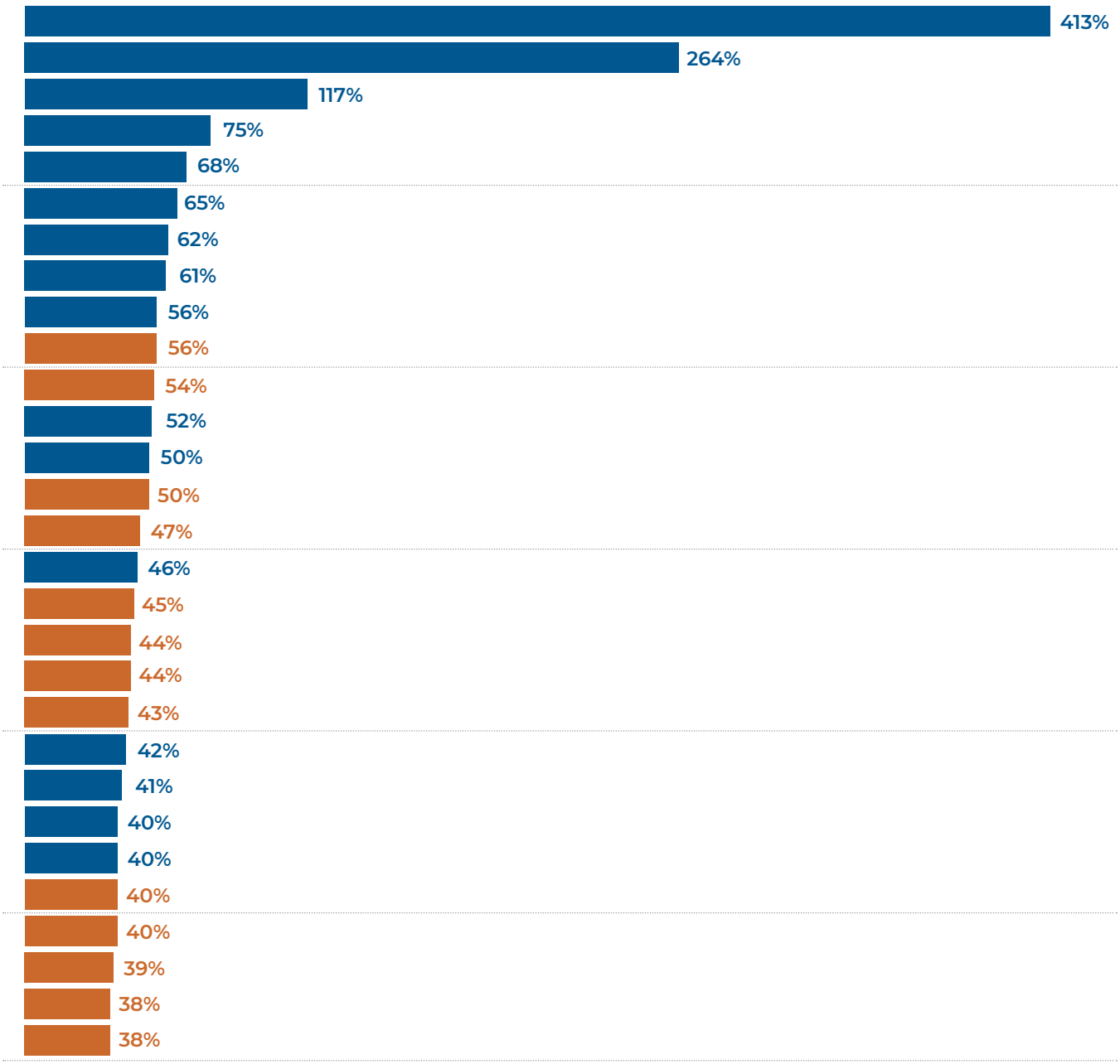


Figure 2 illustrates the percent increase for each of the 29 drugs in our subsample. The drugs represented by blue lines are non-rebated, and the drugs represented by orange lines are rebated. By construction, all drugs in the subsample experienced relatively large increases in list price.

FIGURE 2. DRUGS WITH THE LARGEST PRICE INCREASES DID NOT HAVE REBATES



Note: *Each data point represents the cumulative WAC price increase from 2018 to 2023 for a drug in the top quintile of our sample.*

DISCUSSION

The drugs in our analysis treat a wide range of conditions, including (among rebated drugs) heart disease, cancer, osteoporosis, and diabetes and (among non-rebated drugs) schizophrenia, asthma, diabetes, and Parkinson's disease, among others. Our sample includes some high-volume products and others prescribed less frequently. US sales in 2022 for these drugs ranged from $9 million to $2.5 billion. In Medicare, costs per Part D beneficiary ranged from $750 to more than $170,000 in 2021, and Part D spending for these drugs totaled $19.6 billion.[4] In other words, our sample represents a broad array of drugs.

Our analysis focuses on drugs' list prices, not net prices. Rebates negotiated between manufacturers and PBMs drive net prices below list prices, often well below. List prices are relevant in certain regards, particularly with respect to patient coinsurance costs and costs for patients without prescription drug coverage. List prices are also the subject of much of the recent Congressional attention around drug prices and the claim that rebates are related to prices. As this analysis demonstrates, drug rebates are unrelated to spikes in list price.

Conclusion

This report takes on the persistent question of whether rebates are an explanatory variable for rising drug prices. Consistent with other research, we find that rebates are not associated with list price increases. In fact, among the drugs with the largest price increases, 9 out of 10 were non-rebated. If Congress wants to lower drug prices, the data show that targeting rebates will not be effective. Instead, Congress should focus on policies that promote drug competition.[5]

ENDNOTES

[1] *For more background on the function of PBMs and recent efforts to restrict their business practices, see Alex Brill, "Understanding the Role of PBMs in the US Drug Pricing Debate," September 2023, www.getmga.com/wp-content/uploads/2023/09/Role_of_PBMs.pdf.*

[2] *Alex Brill, "Understanding Drug Rebates and Their Role in Promoting Competition," March 2022, www.getmga.com/wp-content/uploads/2022/03/UDRTRPC.pdf.*

[3] *Drugs identified as likely rebated are Austedo, Cosentyx, Entresto, Inlyta, Jardiance, Kisqali, Ofev, Otezla, Prezcobix, Prolia, Uptravi, Victoza, and Xarelto. Drugs identified as likely non-rebated are Afrezza, Aveed, CaroSpir, Cetraxal, Emflaza, Fabior, Fanapt, Invega, Mytesi, Rexulti, Signifor LAR, Sprix, Theo-24, Xadago, Xhance, and Zirgan.*

[4] *Medicare spending is drawn from the Centers for Medicare and Medicaid Services dataset "Part D Spending by Drug," available through https://data.cms.gov/summary-statistics-on-use-and-payments/medicare-medicaid-spending-by-drug/medicare-part-d-spending-by-drug.*

[5] *For policy ideas that would promote competition by addressing brand drug manufacturers' tactics to thwart competitors, see Alex Brill and Christy Robinson, "Patent Thickets and Lost Drug Savings," January 2023, www.getmga.com/wp-content/uploads/2023/01/Patent_Thickets_Jan_2023.pdf, and Alex Brill, "The Cost of Brand Drug Product Hopping," September 2020, www.getmga.com/wp-content/uploads/2022/04/CostofProductHoppingSept2020.pdf.*

Appendix: Methodology

SAMPLE CRITERIA

To identify and classify drugs as likely rebated and likely non-rebated, we used publicly available formularies for the years 2018–2023 from the three largest PBMs: CVS Caremark (Performance Drug List – Standard Control), Express Scripts (National Preferred Formulary), and OptumRx (Select Standard Formulary).

Non-Rebated Criteria. We assumed drugs were most likely non-rebated if they were excluded or listed as non-preferred on at least one PBM formulary for every year. Specifically, we classified drugs as most likely non-rebated if they had preferred options on CVS Caremark formularies, were excluded on Express Scripts formularies, or were listed as Tier 3 on OptumRx formularies.[1] If a drug was preferred on any of the three formularies for any year, we excluded it from the non-rebated sample.

Rebated Criteria. We assumed drugs were most likely rebated if they were listed as preferred on at least one of the three PBM formularies for every year. Specifically, we classified drugs as most likely rebated if they were preferred on CVS Caremark formularies or Express Scripts formularies or listed as Tier 1 or Tier 2 on OptumRx formularies.

EXTRACTING FORMULARY DATA AND MATCHING

We extracted text data from each formulary, specifically retaining product names and tier information. To reduce computational burden, we identified two seed lists as a starting point. The seed list for the likely rebated sample consists of the top 200 prescription drugs by retail sales (as reported by PharmaCompass). The seed list for the likely non-rebated sample consists of products that meet our non-rebated inclusion criteria for 2023. Using these seed lists, we employed a partial string similarity matching algorithm to match the name strings with corresponding products listed in the formularies for 2018–2023.

Finally, we restricted both samples to single-source brand-name drugs, using the Food and Drug Administration (FDA) Drugs@FDA database and the "Purple Book," the FDA's database on biological products.

PRICE DATA

For each product, we pulled quarterly wholesale acquisition cost (WAC) data at the national drug code (NDC) level for Q1 2018 to Q4 2023 from the Medi-Span Price Rx database. We removed NDC observations with zeros or blanks for all entries and NDCs identified as "inactive" with no replacement. In cases where NDCs became inactive and were replaced by a new NDC, we combined the products into a single entry.

[1] *CVS Caremark formularies list preferred drugs and drugs with preferred alternatives. Express Scripts formularies list preferred drugs and excluded medications. OptumRx formularies identify three tiers of drugs: Tier 1 are the lowest-cost drugs (primarily generics), Tier 2 are midrange-cost drugs (preferred brand drugs), and Tier 3 are the highest-cost drugs (non-preferred).*

FINAL SAMPLES

In total, 143 of the identified drugs (52 rebated and 91 non-rebated) have prices available for the entire study period (Q1 2018 – Q4 2023). We ranked each drug based on the cumulative price change over the sample period and focused on the top quintile of products, those drugs with the largest WAC price increases. The findings presented in this paper relate to these 29 products, of which 13 are rebated and 16 are non-rebated.

Since we rely solely on publicly available information, there is inherent uncertainty about the construction of each sample. Nevertheless, we believe we have captured current and reliable data from the largest PBMs using a consistent and unbiased methodology.

ABOUT THE AUTHOR

Alex Brill is the founder and CEO of Matrix Global Advisors (MGA). He previously served on the staff of the House Ways and Means Committee and the White House Council of Economic Advisers.

ABOUT MGA

MGA is an economic consulting firm in Washington, DC, specializing in healthcare, tax, and fiscal policy. Drawing on years of policy experience, the MGA team uses analytics to help identify, quantify, and solve economic policy problems. On behalf of clients, we conduct original data analysis, construct economic models, conduct research, write white papers and expert reports, and offer strategic advice.

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