



# Revisiting the Pharmaceutical Supply Chain: 2013-2018

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INTELLIGENCE THAT WORKS





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# Executive Summary

In 2017, BRG professionals published a white paper studying the flow of dollars in the US pharmaceutical marketplace and how total spending on brand medicines at the point of sale is distributed across stakeholders that make up the US pharmaceutical supply chain.<sup>1</sup> Since publication of that study, spending on prescription medicines in the US has continued to grow, and many of the market dynamics in place during the period of the original study (2013 through 2015) have persisted from 2016 through 2018. In this update to our original study, we seek to better understand which trends have continued, which new trends have emerged, and how the distribution of total point of sale brand medicine spending across the supply chain has evolved over the last three years.

For purposes of this paper, we narrow our focus to total spending on brand medicines, which we define as the sum of payments for brand medicines made by patients and their health plans at the point of sale (e.g., the pharmacy, outpatient hospital) prior to any rebate, discount, or fee provided by manufacturers. By using this starting point, the analysis makes it possible to measure prescription drug spending by consumers, health plans, government payers, and employers, and the portion thereof realized by manufacturer and non-manufacturer stakeholders. Key findings from our analysis include:

- Supply chain and other entities, including pharmacy benefit managers (PBMs), hospitals, pharmacies, and payers, now retain **nearly half** of all spending on brand medicines at the point of sale, while the biopharmaceutical companies that researched, developed, and manufactured the medicines retain 54%.
- The share of total brand medicine spending retained by biopharmaceutical manufacturers continues to decline. Manufacturers' share of total brand medicine spending fell by 12.5 percentage points from 2013 to 2018.
- The increase in manufacturers' total revenue from sales of brand medicines was **in line with inflation** between 2015 and 2018.
- 340B margins were **nine times greater in 2018 than in 2013** and now account for almost two-thirds of total spending on brand medicines retained by providers (pharmacies and health care providers).

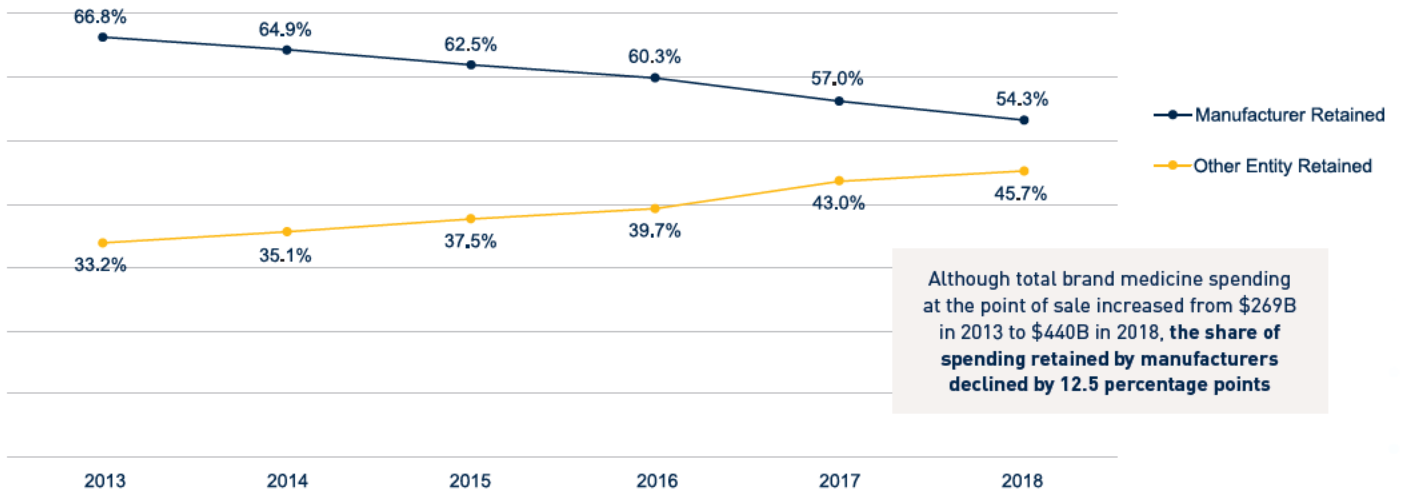
## Key Findings

A common misconception of the pharmaceutical industry is that manufacturers retain the vast majority of drug spending. In our original study, we found that manufacturers' share of total brand medicine spending was declining and represented 62.5% of the total in 2015. This trend accelerated over the last three years, and in 2018 manufacturers retained just 54.3% —down 12.5 percentage points from 66.8% in 2013 (see Figure 1). Despite absolute growth in brand medicine spending at the point of sale, which increased from \$354 billion in 2015 to \$440 billion in 2018, growth in the amount retained by manufacturers remained in line with inflation over the same period. Instead, supply chain and other entities are retaining an increasingly larger share of total brand medicine spending: 45.7% in 2018, up from 33.2% in 2013 (see Figure 1).

<sup>1</sup> Aaron Vandervelde and Eleanor Blalock, *The Pharmaceutical Supply Chain: Gross Drug Expenditures Realized by Stakeholders*, BRG white paper (January 17, 2017), available at: <https://www.thinkbrg.com/newsroom-publications-pharma-supply-chain.html>

FIGURE 1

Percentage of Total Point of Sale Brand Medicine Spending Retained by Manufacturers and Other Entities, 2013-2018



To better understand this dynamic, we studied changes in the share of total brand medicine spending retained by entities other than the manufacturers who research and developed the medicines. In each year from 2015 to 2018, payers (including health plans, PBMs, federal and state governments, and employer groups) received the largest share of the increase in total spending on brand medicines at the point of sale. From 2015 to 2018, payers received half of the increase (see Figure 2). This reflects the ability of payers to extract significant discounts and rebates off of the list price for brand medicines by leveraging increased competition in many therapeutic categories. This rebate growth is well documented, and the most recent Medicare Trustees Report found that rebates to Part D plans on brand medicines in 2018 represent a 25.3% discount off of the reimbursement amount, up from 12.9% in 2013.<sup>2,3</sup>

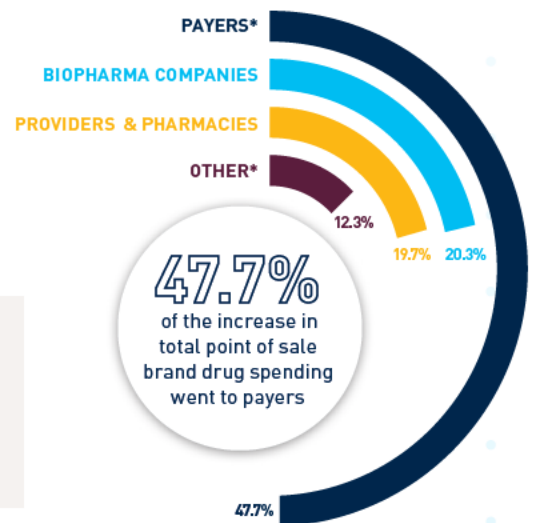
Although rebates lower the total cost of brand medicines to payers and keep net prescription drug price growth at very low levels (0.3% in 2018 for brand medicines),<sup>4</sup> patients with coinsurance or deductibles often do not benefit directly from these rebates in the form of lower cost sharing at the point of sale.

FIGURE 2

*Payers received the largest share of the increase in total point of sale brand drug spending between 2015 to 2018.*

\*Other includes wholesaler margin, patient cost sharing assistance, excise fees, and GPO administrative fees

\*Payers include health plans, PBMs, the federal and state governments, and employer groups



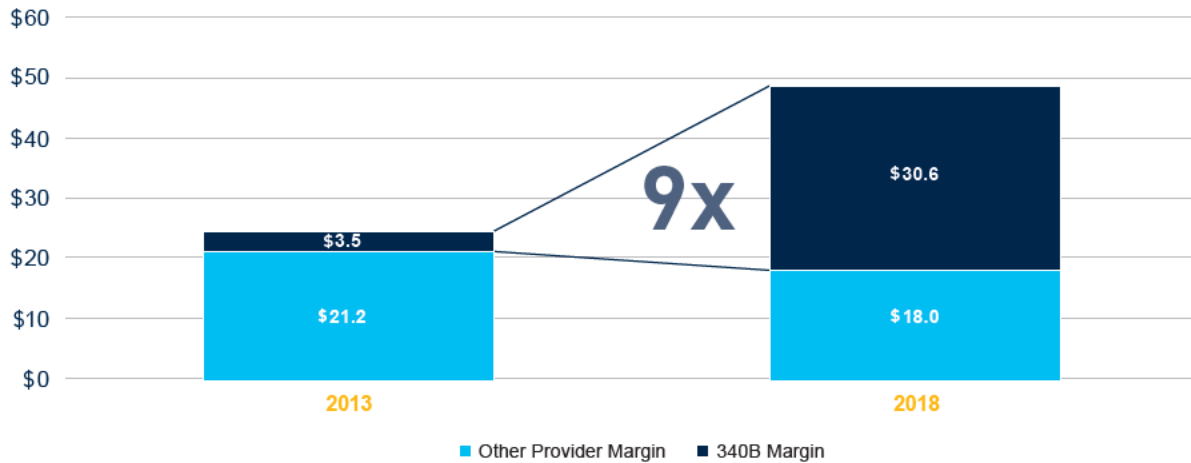
2 Board of Trustees, Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds, *2019 Annual Report of the Boards of Trustees of the Federal Hospital Insurance Trust Fund and the Federal Supplementary Medical Insurance Trust Fund* (April 22, 2019), available at: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/Downloads/TR2019.pdf>

3 The Medicare Trustees Report figure represents rebates received by Part D plans as a percentage of total Part D drug reimbursement. For purposes of this study, we accounted for the percentage of rebates withheld by PBMs in calculating rebates paid by manufacturers.

4 IQVIA, *2018 Medicine Use and Spending in the US* (May 2019), available at: [https://www.iqvia.com/-/media/iqvia/pdfs/institute-reports/medicine-use-and-spending-in-the-us---a-review-of-2018-outlook-to-2023.pdf?\\_=1573048662823](https://www.iqvia.com/-/media/iqvia/pdfs/institute-reports/medicine-use-and-spending-in-the-us---a-review-of-2018-outlook-to-2023.pdf?_=1573048662823)

Providers—including pharmacies that dispense brand medicines to patients, as well as physicians and hospitals that administer brand medicines directly to patients—have also benefited from growth in total brand medicine spending. Provider margins accounted for \$48.6 billion in total brand medicine spending in 2018, up from \$24.7 billion in 2013 (see Figure 3). Unprecedented expansion in the 340B drug discount program during this period, including rapid adoption of 340B contract pharmacy networks, was the primary driver of this growth. Between 2013 and 2018, over 14,700 new pharmacies established contract pharmacy relationships with 340B covered entities; at the same time, over 9,500 covered entities registered in the 340B program for the first time.<sup>5</sup> As a result of this growth, total margin on 340B purchased brand drugs was nine times greater in 2018 than 2013. Numerous for-profit contract pharmacies, along with the 340B covered entities with which they contract, benefited from this trend.

**FIGURE 3**  
Gross Pharmacy and Provider Margin (\$B)



## Conclusions

Much attention is paid to topline growth in pharmaceutical spending, but manufacturers have not been the primary recipients of increasing total brand medicine spending over the past three years. Instead, other stakeholders in the pharmaceutical supply chain—payers and providers in particular—have benefited substantially from increased competition and expansion of the 340B program. Despite growing recognition of the market dynamics that underpin these trends, little has changed in how the pharmaceutical supply chain is structured or with the incentives that exist among supply chain participants. We anticipate that, absent new legislation or regulation to reform these aspects of the pharmaceutical supply chain, these trends will continue for the foreseeable future.

5 BRG analysis of Office of Pharmacy Affairs 340B covered entity and contract pharmacy databases



## Defined Terms

### ***Brand Medicine:***

Innovator medicine with no marketed generic equivalent. The manufacturer typically negotiates rebates and discounts with payers for formulary placement and other forms of market access for retail drugs, and negotiates purchase discounts with providers for market access for non-retail drugs. Branded medicine drugs do not include any branded generic products.

### ***Total Brand Medicine Spending:***

Initial point-of-sale payment by a payer and patient for a brand medicine before accounting for negotiated rebates, discounts, or fees. Does not include dispensing fees or claims administration fees.

### ***Rebates:***

Statutory and negotiated discounts that manufacturers pay to payers, including commercial and Part D rebates and administrative fees paid to payers, Medicaid rebates, TriCare rebates, and Federal Supply Schedule discounts.

## Appendix 1 – Methodology and Data Sources Considered

In preparing this update to our original study, we relied almost exclusively on the methodology used in the original study. The original publication includes a detailed methodology section, which can be referenced [here](#). In certain instances, we elected to update our methodology to reflect new information gathered over the prior two years or to address deficiencies in data available to us. Additional information on these methodological updates is provided below.

### New Data Sources

- IQVIA's 2018 *Medicine Use and Spending in the US* report includes a detailed breakdown of manufacturer patient assistance for commercially insured patients.<sup>6</sup> We utilized these figures to update the patient cost-sharing assistance portion of the share of total brand medicine spending.
- A recent publication by Milliman includes an estimate of commercial reimbursement for physician administered drugs as a percentage increase to Average Sales Price (ASP). We updated our original methodology to reflect the findings from this study.

### Methodological Update

- We made a methodological update to the 340B margin for pharmacies and providers. Reimbursement for 340B purchases can be calculated by using the total purchases at the 340B price and the average 340B discount. We used the average Medicaid rebate percentage as a conservative estimate of the average 340B discount percentage.

### Total Brand Medicine Spending

- "Total Brand Medicine Spending" represents the amount paid for a brand medicine at the point-of-sale, and does not account for negotiated rebates, discounts, fees, or other price concessions. Dispensing fees and/or claims administration fees are not included.

Category	Component	Updated Source
Market Access Rebates and Discounts	Patient Cost-Sharing Assistance	<i>IQVIA Medicine Use and Spending in the US (2018)</i>
Wholesaler and Provider Margins	Provider Margin	Milliman Analysis of 340B Hospitals' Outpatient Department Acquisition Cost and Commercial Reimbursement for Brand Medicines (2019) <a href="http://www.milliman.com/340b-HOP-Commercial-Reimbursement/">http://www.milliman.com/340b-HOP-Commercial-Reimbursement/</a>
Statutory Rebates and Fees	340B Program Income	MACPAC Medicaid Drug Spending Trends (2019)

<sup>6</sup> IQVIA (2019).

## Appendix 2 – Total Point of Sale Payments for Brand Medicines by Component

Total Point of Sale Payments for Brand Medicines by Component (in \$billions)							
Component Type	Component	2013	2014	2015	2016	2017	2018
Statutory Rebates and Fees	Medicaid Drug Rebate Program	\$ 15.6	\$ 18.4	\$ 21.9	\$ 27.1	\$ 30.4	\$ 33.6
	Part D Coverage Gap Discounts	4.3	5.1	5.8	5.8	7	8.5
	Tricare Rebates & Federal Supply Schedule Discounts	3.5	4.6	4.7	4.8	5	5.3
	Excise Fee	2.8	3	3.0	3	4	4.1
Market Access Rebates and Discounts	Negotiated Health Plan and PBM Rebates and Fees	31.2	42.1	54.9	60.1	67.8	83.4
	Patient Cost Sharing Assistance	4.2	5.4	6.9	8.7	10.6	12.9
Wholesaler and Provider Margins	Pharmacy / Provider Margin <sup>7</sup>	24.7	27.2	31.7	38.2	42.8	48.6
	Wholesaler Margin	2.3	2.7	3.1	3.3	3.4	3.8
	GPO Administrative Fees	0.6	0.6	0.7	0.6	0.6	0.6
<b>Total Point of Sale Payments for Brand Medicines</b>		<b>\$ 268.7</b>	<b>\$ 310.4</b>	<b>\$ 354.1</b>	<b>\$ 381.4</b>	<b>\$ 398.7</b>	<b>\$ 439.6</b>
Net Amount Realized by Brand Manufacturer (\$)		\$ 177.5	\$ 201.3	\$ 221.4	\$ 229.8	\$ 227.1	\$ 238.8
Net Amount Realized by Brand Manufacturer (%)		66.8%	64.9%	62.5%	60.3%	57.0%	54.3%

<sup>7</sup> 340B margin is included in the pharmacy and provider margin



## About Berkeley Research Group

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