

White Paper

# The Cost of 340B to State Employee Health Plans

*Stretching Federal Resources or State Budgets?*

CHUAN SUN, MS, MA, IQVIA Market Access Technology Solutions

HARISH KARNE, MS, IQVIA Market Access Technology Solutions

RORY MARTIN, PHD, IQVIA Market Access Technology Solutions



# Table of contents

<b>Abstract</b>	<b>1</b>
<b>Introduction</b>	<b>2</b>
The size of 340B spread revenue, middlemen, and patient benefit	2
The cost of the 340B program	2
State employee plans	2
<b>Data and methods</b>	<b>3</b>
Data	3
Methods	3
<b>Limitations</b>	<b>4</b>
A note on state EGWP plans	4
<b>Findings</b>	<b>4</b>
Alternative scenario analysis	8
<b>Discussion</b>	<b>9</b>
<b>References</b>	<b>12</b>
<b>About the authors</b>	<b>14</b>
<b>Acknowledgements</b>	<b>14</b>
<b>Funding</b>	<b>14</b>

# Abstract

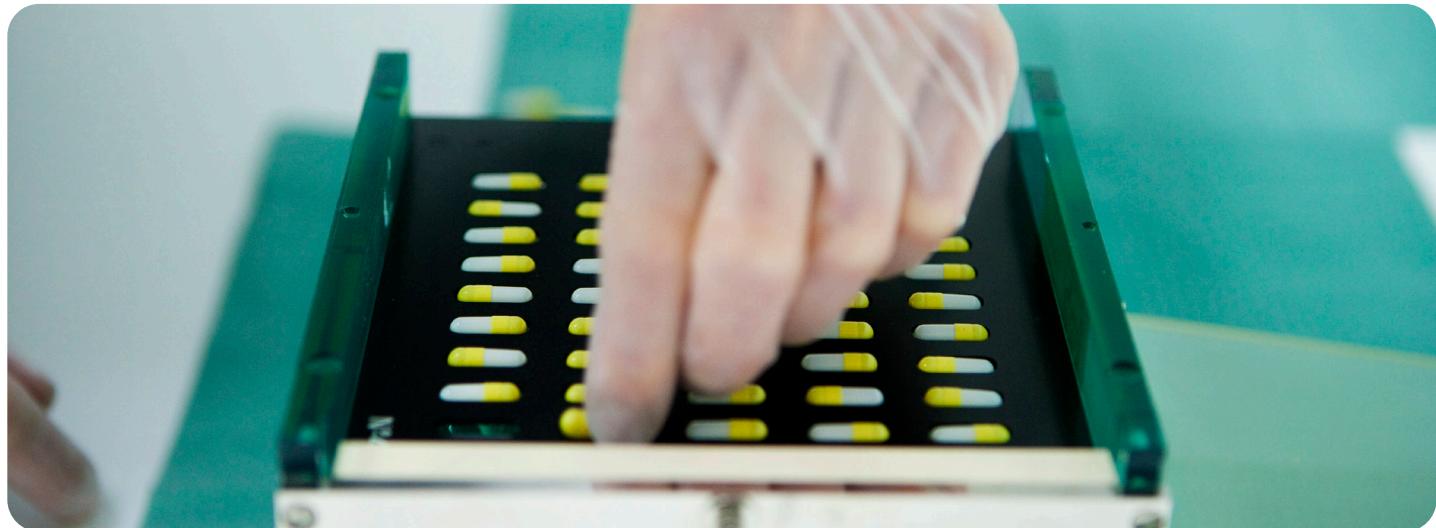
The 340B Drug Pricing Program (“340B program”) is a federal drug discount program in which drugmakers provide heavily discounted drugs to participating hospitals and clinics. These 340B providers then prescribe the discounted drugs to patients and charge full prices (or higher) to generate 340B revenue. While the authors’ previous papers showed 340B discounts displace the rebates that manufacturers pay health plans, this paper directly examines the actual prices paid by employers and workers above and beyond the 340B acquisition cost. When state public employee health plans pay for 340B drugs, patients and state taxpayers bear the cost.

This study quantifies the fiscal impact of the 340B program on state employee health plans across the United States, focusing on the “spread” between discounted 340B prices paid by 340B providers and standard payer reimbursement rates received from state plans. Using a combination of IQVIA proprietary data and public sources, we estimate both the total 340B spread revenue paid by state employee plans and the Out-Of-Pocket (OOP) overcharge paid directly by state employee plan patients at the pharmacy counter.

Our analysis shows that state employee health plans incurred about \$1 billion in 340B upcharges annually

on self-administered drugs alone, with a weighted average markup of 162%. From Q3 of 2024 to Q2 2025 (four quarters), state totals vary from \$0.5 million in Oklahoma to \$89 million in New York. There is also significant variation in the per-patient 340B spread, ranging from as low as \$23 in New Jersey to as high as \$517 in Vermont, with a national average of \$139. On average, 12% of OOP costs paid by state employee plan patients represented markups in which their OOP costs were higher than the total 340B acquisition cost of the drugs, totaling about \$44 million nationally. Physician-administered drugs, which are generally billed through medical benefits, can be more expensive and may incur even higher 340B spread.

These excess pharmacy costs, taken in combination with the fact that the 340B discount is rarely passed on to patients, have direct implications for state employees, taxpayers, and the sustainability of state-sponsored health benefits. The burden is not limited to state health plan budgets but also affects patients via OOP costs, potentially leading to medical debt and/or reduced adherence. These findings may help state policymakers to understand the true cost of the 340B program, and to correctly attribute healthcare cost increases associated with policy proposals that grow the 340B program, such as manufacturer contract pharmacy mandates.



# Introduction

The 340B program was forecast to exceed \$170 billion in sales at list price for 2025 [IQVIA preliminary estimate], and is poised to overtake Medicare Part D as the largest federal drug pricing program. The program's size and continuing rapid growth raise critical questions for federal and state policymakers.

Participating 340B hospitals and clinics generate 340B revenue through the "spread" between the discounted acquisition cost of the drug and the reimbursement received from payers, and 340B providers assert they use these 340B profits to fund uncompensated care for vulnerable populations. However, evidence-based studies have raised questions about the size of 340B profits, who receives them, and how they are used.

## **The size of 340B spread revenue, middlemen, and patient benefit**

A recent report published by the North Carolina State Treasurer estimated that 340B hospitals in that state charged 5.4 times the amount they paid for 340B IV oncology drugs, collecting an 85% higher average price markup than non-340B hospitals.<sup>1</sup> Also, the large financial incentives that 340B profits create have driven provider consolidation and shifted the site of care to hospital outpatient departments, dynamics which are estimated to have raised premiums by approximately \$137 per beneficiary.<sup>2</sup>

Recent state and federal reports indicate that a substantial amount of 340B revenue is being extracted as fees by for-profit middlemen such as national pharmacy chains, acting as contract pharmacies, and by Third-Party Administrators (TPAs). For example, a study published by the Minnesota Department of Health reported that payments to such 340B middlemen were in excess of \$120 million per year in the state, or 16% of gross 340B revenue paid to external parties.<sup>3</sup> Also, in a report issued by the U.S. Senate Committee on Health, Education, Labor and Pensions, several national pharmacy chains reported their 340B contract pharmacy

fees are up to 14% of the reimbursed amount of the drug, or \$65 per prescription if a flat fee is used.<sup>4</sup> The same report revealed that TPAs reported their fees are 8-20% of the reimbursed amount of the drug. Contract pharmacy and TPA fees are additive, and the total fees paid to these 340B middlemen has been estimated to be between \$16.9 and \$23.7 billion per year across the entire program.<sup>5</sup>

There is limited evidence of a direct benefit for vulnerable populations from the 340B program. Despite the program having grown by 98.5% from 2018 to 2022 measured at list price,<sup>6</sup> 340B hospital charity care ratios declined from 2.49% to 2.15% during the same period.<sup>7</sup> Also, when Disproportionate Share Hospitals (DSHs) begin participating in 340B, there is no measurable change in their total community benefit spending.<sup>8</sup>

## **The cost of the 340B program**

340B providers have asserted the program costs taxpayers nothing because it is solely funded by drug manufacturers.<sup>4,9</sup> However, this claim is not supported by data-driven studies. For example, it has been estimated that the program costs self-insured employers and their workers over \$5 billion a year because 340B discounts displace manufacturer rebates to employers.<sup>10</sup> A follow-on study found that the cost of 340B to states was \$13 to \$152 per covered beneficiary per year, depending on the degree of 340B utilization in the state, with rural states bearing the highest costs.<sup>11</sup> The program also increases costs for Medicaid and Medicare by displacing rebates.<sup>12</sup>

## **State employee plans**

When 340B hospitals and clinics acquire medicines at substantial discounts but charge payers at or above standard rates, the additional cost is borne by employers and their workers. When the employer is a state government, whose healthcare plans are taxpayer-funded, this becomes a hidden cost for the state's taxpayers.



State employee health plans across the country are facing mounting financial strain. For instance, the Massachusetts Senate recently passed a bill for \$240 million to cover a shortfall in the state health insurance fund.<sup>13</sup> In Florida, the state employee health plan reported an operating loss of \$296 million for fiscal year (FY) 2024 and a projected loss of \$425 million for 2025-2026.<sup>14</sup> Other states have already chosen to increase premiums to cover any existing or potential shortfall, including West Virginia (10.5% increase for the Public Employees Insurance Agency (PEIA))<sup>15</sup> and California (10.79% increase for the California Public Employees Retirement System (CalPERS)).<sup>16</sup>

This study estimates the amount of 340B profit being generated by 340B providers using state employee health plans and patients. By accurately establishing the true cost of the 340B program for state employee plans, we hope to arm policymakers with information to help them design effective reforms, including understanding potential consequences of those reforms such as driving up taxpayer costs and reducing funding for other state priorities.

## Data and methods

### Data

This study utilizes a combination of public and IQVIA proprietary data sources, including IQVIA's Longitudinal Access and Adjudication Dataset (LAAD) for pharmacy claims, IQVIA's subnational sales database (subsequently referred to as "DDD"), IQVIA's 340B scores data, and public data on state employee health plans.

LAAD is a national sample of pharmacy claims that includes details about patient cost-sharing as well as plan and payer information. While physician-administered drugs may qualify for the 340B program, they fall outside the scope of this analysis. DDD captures wholesaler sell-in data to pharmacies, hospitals, and clinics. 340B scores estimate the likelihood of a prescription being 340B-eligible, by integrating 340B covered entity and contract pharmacy participation data with physician affiliation data. A detailed methodology walkthrough of the analysis is provided below in Methods.

We also used public data for state employee health plan enrollment to check for robustness and conduct analyses for alternative scenarios.

### Methods

#### STEP 1: CLASSIFY PBM/PAYER/PLAN

We identified plans funded by state or local governments, covering public employees and their qualified dependents.

#### STEP 2: APPLY TIMEFRAME CRITERIA

Plans were selected based on prescription claim volume within the study period: July 1, 2023 – June 30, 2025.

#### STEP 3: SEGMENT PLANS BY FUNDING SOURCE

The study focused on primary state plans consisting of state employee plans only. Examples include CalPERS, Health Select of Texas (the plan for the Employees Retirement System of Texas), and the Louisiana Office of Group Benefits plan. Four states — Iowa, Idaho, Nebraska, and South Dakota — were excluded because their state employees are blended with non-state employees within large MCO plans.

Two additional categories of plans — public educators and local government plans — were excluded from “primary state plans” but were analyzed separately. Findings are summarized in the appendix. “Public educators” consisted of plans for state universities and public schools. Because these plans are not exclusively funded by the state, they were not included in primary state plans. Examples include Arizona State University and New Mexico Public Schools Insurance Authority. “Local plans” covered plans for employees of municipal governments (counties, cities) and any other agencies such as transit authorities.

#### **STEP 4: ATTACH 340B SCORES AND PRICING TO CLAIMS**

340B scores measure the likelihood of each pharmacy claim being 340B eligible. By estimating eligibility at the claim level, we are able to directly attribute 340B exposure to state employee health plans. The Wholesale Acquisition Cost (WAC) and 340B price for each drug is then calculated and used to dollarize each claim.

#### **STEP 5: CALCULATE SUMMARY METRICS FOR STATE EMPLOYEE HEALTH PLANS**

The study focuses on two main metrics: total 340B spread revenue and patient Out-Of-Pocket (OOP) overcharge. The former is measured as the difference between a drug’s WAC and 340B price, while the latter is the difference between any patient cost-sharing, such as any copay, coinsurance, or deductibles, and the drug’s 340B acquisition cost.

## **Limitations**

Physician-administered drugs, which are mostly reimbursed in medical claims, are not included in the study, because reimbursement amounts for physician administered drugs were not available and can vary substantially by site.<sup>1</sup> Only pharmacy claims volume from plans sponsored and funded by state governments was included.

Claims from public plans in Washington, D.C. and U.S. territories are excluded.

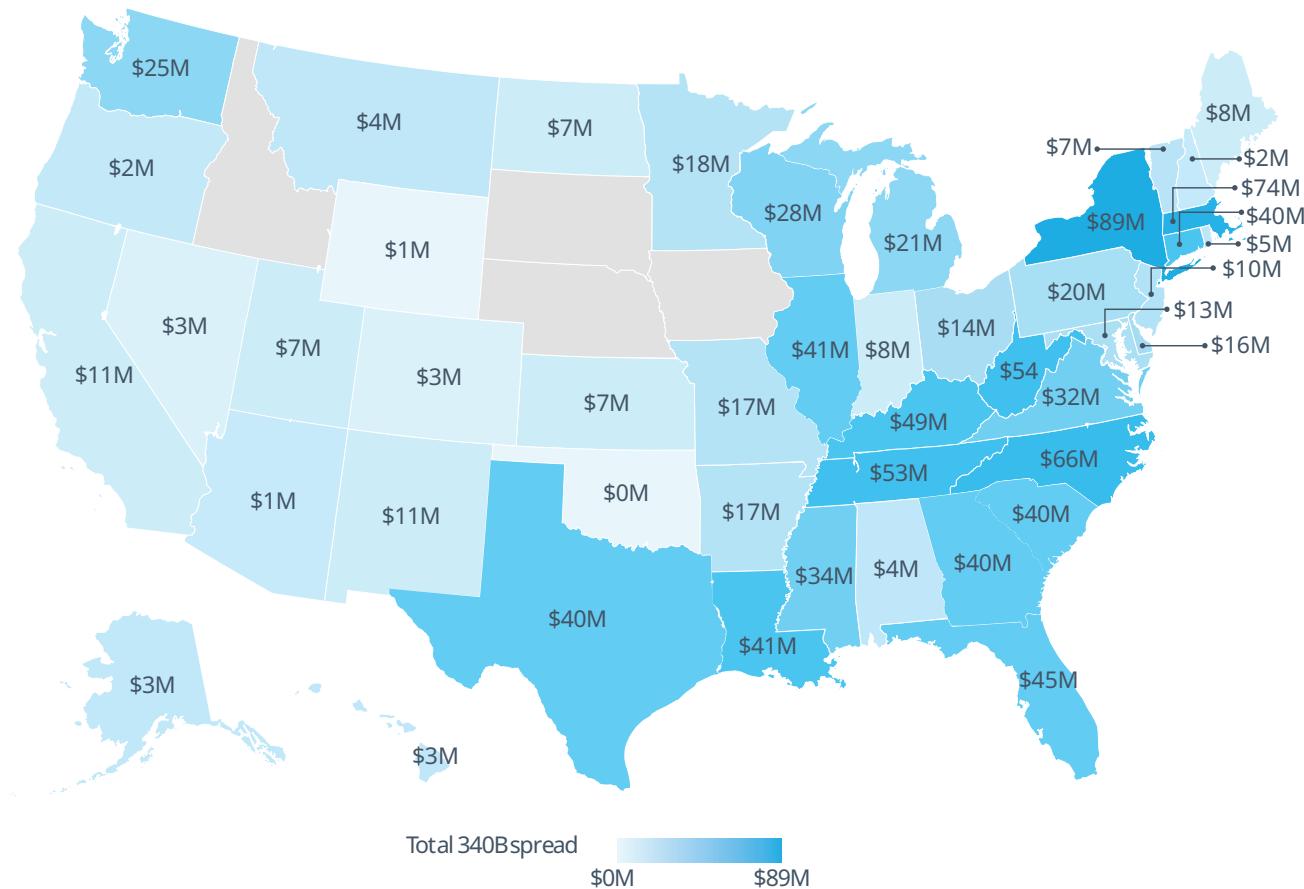
#### **A note on state EGWP plans**

In addition to traditional state health plans for active employees, many states offer Employer Group Waiver Plans (EGWPs), a type of Medicare prescription plan specifically designed for eligible retirees. EGWPs allow employers to provide more generous benefits to their retired workforce enrolled in Medicare, often with enhanced drug coverage and lower out-of-pocket costs. Because they receive federal in addition to state funding, EGWP plans were excluded from the analysis.

## **Findings**

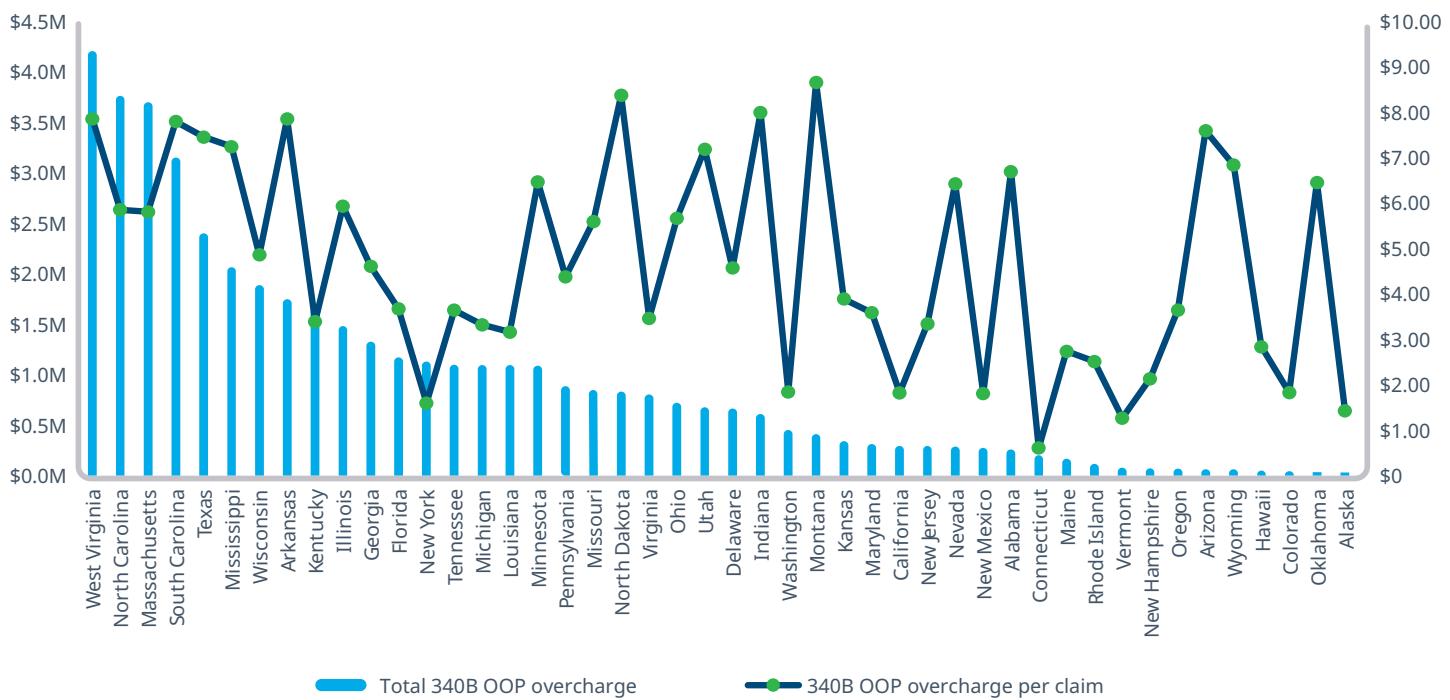
The aggregate state-level 340B spread paid by state plans (per year) reveals significant variation across the nation, with amounts ranging from as low as \$1 million in Oklahoma to as high as \$89 million in New York. Mid-range states such as Illinois (\$41 million), Michigan (\$25 million), and New Mexico (\$11 million) also demonstrate substantial spread. See Figure 1 for a visualization of state results. For the complete list of state-level results, see the appendix. Nationally, the total 340B spread revenue incurred to state employee health plans is approximately \$1 billion.

**Figure 1: Total annual 340B spread paid by state employee health plans. IA, ID, NE and SD were excluded:  
See Methods**





**Figure 2: Total 340B out-of-pocket overcharge and out-of-pocket overcharge per 340B claim. IA, ID, NE and SD were excluded: See Methods**



Taking a deeper look at behavior at the patient level, the state-level 340B spread (Figure 3) reveals significant variation across the country, with amounts ranging from as low as \$23 in New Jersey to as high as \$517 in Vermont. Several states exhibit notably high spreads, including West Virginia (\$412), Maine (\$389), and Massachusetts (\$282), suggesting concentrated financial

impact in certain regions. Mid-range states such as Illinois (\$241), Michigan (\$235), and New Mexico (\$225) also demonstrate substantial markups, while others like California (\$32) and Texas (\$92) remain on the lower end. Overall, the weighted average nationwide is \$139 per patient. These differences are primarily driven by the difference in 340B exposure across states.

**Figure 3: 340B spread revenue per patient, out-of-pocket overcharge per claim, 340B exposure, and 340B markup by state. IA, ID, NE and SD were excluded: see Methods.**

STATE	340B SPREAD PER PATIENT	340B OOP OVERCHARGE PER CLAIM	340B EXPOSURE	340B MARKUP
AK	\$116	\$1.43	6%	179%
AL	\$64	\$6.69	5%	138%
AR	\$118	\$7.85	9%	134%
AZ	\$121	\$7.58	9%	141%
CA	\$32	\$1.82	4%	159%
CO	\$79	\$1.83	6%	119%
CT	\$216	\$0.61	17%	186%
DE	\$179	\$4.57	14%	161%
FL	\$143	\$3.67	8%	187%
GA	\$96	\$4.6	4%	130%
HI	\$61	\$2.83	3%	136%
IL	\$241	\$5.93	11%	132%
IN	\$162	\$7.99	12%	153%
KS	\$113	\$3.89	10%	146%
KY	\$193	\$3.39	11%	131%
LA	\$278	\$3.16	13%	158%
MA	\$282	\$5.8	20%	147%
MD	\$85	\$3.59	5%	167%
ME	\$389	\$2.74	26%	158%
MI	\$235	\$3.32	19%	146%
MN	\$164	\$6.46	14%	151%
MO	\$282	\$5.59	19%	110%
MS	\$208	\$7.24	14%	181%
MT	\$218	\$8.65	20%	145%
NC	\$122	\$5.85	9%	171%
ND	\$192	\$8.37	24%	199%
NH	\$86	\$2.13	15%	159%
NJ	\$23	\$3.34	2%	151%
NM	\$225	\$1.81	21%	131%
NV	\$78	\$6.42	11%	160%
NY	\$127	\$1.6	8%	146%
OH	\$167	\$5.66	11%	160%
OK	\$107	\$6.45	9%	149%

STATE	340B SPREAD PER PATIENT	340B OOP OVERCHARGE PER CLAIM	340B EXPOSURE	340B MARKUP
OR	\$98	\$3.64	9%	93%
PA	\$138	\$4.38	10%	209%
RI	\$165	\$2.51	11%	151%
SC	\$94	\$7.79	8%	174%
TN	\$197	\$3.64	7%	142%
TX	\$92	\$7.45	6%	167%
UT	\$77	\$7.18	9%	170%
VA	\$130	\$3.46	7%	162%
VT	\$517	\$1.27	41%	145%
WA	\$77	\$1.85	6%	131%
WI	\$168	\$4.86	23%	170%
WV	\$412	\$7.85	29%	177%
WY	\$31	\$6.83	3%	139%

## Alternative scenario analysis

To test the coverage of data used, the authors reviewed public disclosure documents and compared figures for the numbers of beneficiaries versus unique patients identified in the claims data. As seen in Figure 4, the total number of unique patients captured in our data

is around 7.4 million. As described in Methods, due to our conservative approach this measure could be undercounting the total set of state public employees plus their dependents by up to 46%. When extrapolated to this larger pool, the 340B spread revenue paid by state employee health plans can be up to \$1.9 billion.

**Figure 4: Extrapolated 340B revenue paid by states using coverage percentages**

SCENARIO	ORIGINAL CALCULATION	LOW ESTIMATE	HIGH ESTIMATE
Number of patients under state employee health plans	7.4M	8.7M	13.7M
Total 340B spread revenue	\$1.0B	\$1.2B	\$1.9B

## Discussion

This study reveals a substantial fiscal impact of the 340B program on state employee health plans and their patients. State employee health plans across 46 states collectively incurred an estimated \$1.0 billion in excess costs due to 340B revenue generation, with individual states such as New York facing annual overcharge as high as \$88.8 million. These costs translate into higher premiums for public employees, increased taxpayer costs, and growing pressure on the sustainability of state-sponsored health benefits.

Our estimates are likely conservative, given the limited scope of self-administered drugs reimbursed through pharmacy claims. For example, oncology drugs, many of which are physician-administered and reimbursed as a medical benefit, may command even higher markups, as highlighted in the North Carolina report.<sup>1</sup>

A critical dimension of this burden is the effect on patient out-of-pocket costs. Our analysis found that, due to 340B revenue generation, patients covered by state employee health plans paid a 12% markup per year for a typical \$40 copay on branded drugs. High out-of-pocket costs are associated with decreased patient adherence, negative health outcomes, and higher long-term costs for both patients and payers.<sup>17,18,19,20</sup> In North Carolina and nationally, high out-of-pocket costs have contributed to medical debt, financial distress, and avoidance of necessary care among vulnerable populations.

Previous studies suggest that legislative expansion of contract pharmacy access could amplify 340B share of drugs, further increasing these costs by millions of dollars annually. For example, it has been estimated that states lose \$2.3 billion annually in Medicaid rebates due to 340B carve-outs.<sup>12</sup> In another report, 340B profits were estimated to be nearly \$65 billion — about 10% of brand medicine spending.<sup>21</sup> Also, it has been reported that hospitals participating in the 340B program, constituting up to 86% of 340B sales,<sup>22</sup> sometimes charge patients and insurers several times the discounted acquisition cost for specialty drugs,

with markups as high as 25 times the average sales price, and that these profits are rarely passed on to patients or used to support vulnerable populations.<sup>23</sup> Studies have also questioned whether the expansion of 340B contract pharmacies has benefited vulnerable communities, finding that growth in the number of contract pharmacies was uncorrelated with uninsured rates, poverty rates, or medical underservice, and that hospitals joining the program in later years tended to serve wealthier populations.<sup>24,25</sup>

Taken together, these findings suggest that while the 340B program was created to support safety-net providers and improve access for vulnerable patients, its current structure allows for significant profit-taking by hospitals and leaves state employee health plans and their patients exposed to unsustainable cost growth. The lack of transparency and accountability in how 340B revenues are used further complicates efforts to ensure that the program's benefits are equitably distributed. Most concerning, the burden of inflated costs is not limited to public budgets but falls directly on patients, whose access to life-saving therapies may be compromised by unaffordable out-of-pocket expenses.

Policy solutions should be considered with care and in collaboration with all stakeholders. If states can align reimbursement more closely with actual acquisition costs rather than commercial prices, it may help reduce overall pharmacy spending and patient out-of-pocket costs. Increasing transparency requirements around 340B pricing, contract pharmacy arrangements, and the use of program revenues would enable better oversight and more informed decision-making by policymakers. Finally, increased legislative oversight seeking 340B transparency could help realign the program with its original mission.

Ultimately, the goal is to ensure that its benefits are delivered efficiently, equitably, and sustainably — protecting both vulnerable patients and the public resources entrusted to state employee health plans, while also safeguarding patients from the harm of excessive out-of-pocket costs.

**Appendix: Total 340B spread paid by primary state plans (as included in Figure 3), plans for public educators, and local government plans (\$ millions). See Methods for plan category definitions.**

STATE	PRIMARY STATE PLAN	PUBLIC EDUCATORS	LOCAL PLANS	STATE TOTAL
AK	\$3.2	N/A	\$12.6	\$15.8
AL	\$3.6	\$7.7	\$1.3	\$12.7
AR	\$17.0	\$5.4	N/A	\$22.4
AZ	\$0.9	\$6.6	\$4.5	\$12.1
CA	\$11.0	\$25.7	\$45.1	\$81.8
CO	\$2.8	\$0.1	\$9.2	\$12.2
CT	\$39.7	N/A	\$0.7	\$40.4
DE	\$15.7	N/A	\$0.3	\$16.1
FL	\$45.3	\$3.4	\$1.2	\$49.9
GA	\$40.5	\$7.3	\$0.4	\$48.2
HI	\$3.5	N/A	\$0.8	\$4.3
IA		N/A		
ID		N/A		
IL	\$40.6	\$15.6	\$13.8	\$70.0
IN	\$8.2	\$8.5	\$0.1	\$16.9
KS	\$7.3	\$0.3	N/A	\$7.6
KY	\$49.3	\$10.6	N/A	\$60.0
LA	\$41.0	\$3.6	\$2.0	\$46.6
MA	\$73.9	N/A	\$6.1	\$80.0
MD	\$12.7	\$3.3	\$2.8	\$18.8
ME	\$7.8	N/A	N/A	\$7.8
MI	\$20.9	\$94.4	\$36.9	\$152.2
MN	\$18.2	\$5.9	\$5.2	\$29.3
MO	\$16.8	\$26.0	\$12.5	\$55.2
MS	\$33.8	N/A	N/A	\$33.8
MT	\$4.2	\$1.2	\$1.3	\$6.7
NC	\$65.8	N/A	\$4.8	\$70.6
ND	\$6.8	N/A	N/A	\$6.8
NE		N/A		
NH	\$1.9	\$0.9	\$0.2	\$3.0
NJ	\$10.1	\$0.8	\$19.5	\$30.4
NM	\$10.6	\$14.7	\$14.8	\$40.1
NV	\$2.9		\$1.9	\$4.9
NY	\$88.8	\$10.9	\$18.8	\$118.4

STATE	PRIMARY STATE PLAN	PUBLIC EDUCATORS	LOCAL PLANS	STATE TOTAL
OH	\$14.5	\$27.8	\$7.9	\$50.2
OK	\$0.5	\$18.3	\$0.3	\$19.1
OR	\$2.1	\$5.2	\$0.6	\$8.0
PA	\$19.7	\$3.5	\$17.6	\$40.9
RI	\$4.8	N/A	\$1.0	\$5.9
SC	\$39.8	N/A	\$27.4	\$67.2
SD		N/A		
TN	\$52.9	\$3.9	\$1.5	\$58.3
TX	\$39.6	\$83.0	\$39.4	\$161.9
UT	\$7.1	\$0.4	\$2.4	\$10.0
VA	\$31.8	\$4.8	\$2.4	\$38.9
VT	\$6.8	N/A	\$5.6	\$12.4
WA	\$25.3		\$4.9	\$30.2
WI	\$27.8	\$0.2	\$27.2	\$55.1
WV	\$54.1	N/A	N/A	\$54.1
WY	\$0.8	N/A	N/A	\$0.8
<b>Total</b>	<b>\$1032.6</b>	<b>\$400.2</b>	<b>\$355.1</b>	<b>\$1787.9</b>

# References

1. State Treasurer of North Carolina. [Overcharged: state employees, cancer drugs, and the 340B Drug Pricing Program](#). 2024.
2. Masia N, Motyka J, Westrich K, and Campbell J. [The 340B Drug Pricing Program and commercial insurance premiums](#). Health Capital Group. 2025.
3. Minnesota Department of Health. [340B covered entity report: report to the legislature](#). 2024.
4. U.S. Senate Committee on Health, Education, Labor, and Pensions. [Majority Staff Report: Congress must act to bring needed reforms to the 340B Drug Pricing Program](#). April, 2025.
5. Sarraille W, Zeng S, and Martin R. [A close look at middlemen fees in the 340B rebate program](#). Law360. 2025.
6. Martin R and Karne H. [The size and growth of the 340B program in 2024](#). IQVIA. 2025.
7. Smith W and Archambault J. [340B drug discounts: an increasingly dysfunctional federal program](#). Pioneer Institute. 2025.
8. Nikpay S, Buntin M, Conti R. [Relationship between initiation of 340B participation and hospital safety-net engagement](#). Health Serv Res. 2020;55(2):157-169.
9. Hassell J. [Don't believe drug companies: 340B is a program worth saving](#). The Hill. 2023.
10. Sun C, Zeng S and Martin R. [The cost of the 340B program part 1: self-insured employers](#). IQVIA. 2024.
11. Sun C, Zeng S, and Martin R. [The cost of the 340B program to states](#). IQVIA. 2025.
12. Blalock E and Launsbach C. [The financial impact to Medicaid from the 340B Drug Pricing Program](#). Berkeley Research Group. 2025.
13. Commonwealth of Massachusetts. [Massachusetts Senate passes health insurance funding for state employees](#). 2025. Last accessed December 5, 2025.
14. Florida Department of Management Services. [State Employees' Group Health Self-Insurance Trust Fund. Report on financial outlook for the fiscal years ending June 30, 2025 through June 30, 2030](#). 2025. Last accessed December 5, 2025.
15. West Virginia Offices of the Insurance Commissioner. [Accident and health insurance 2023 market report](#). 2025. Last accessed December 5, 2025.
16. California Public Employees' Retirement System (CalPERS). [Health Benefits Program Annual Report](#). Last accessed December 5, 2025.

17. Fusco N, Sils B, Graff J, Kistler K, and Ruiz K. [Cost-sharing and adherence, clinical outcomes, health care utilization, and costs: a systematic literature review](#). J Manag Care Spec Pharm. 2023.
18. Sparks G, Lopes L, Montero A, Presiado M, and Hamel L. [Americans' challenges with health care costs](#). Kaiser Family Foundation. 2025.
19. Lipska K, Ross J, Van Houten H, Beran D, Yudkin J, and Shah N. [Use and Out-of-Pocket Costs of Insulin for Type 2 Diabetes Mellitus From 2000 Through 2010](#). JAMA 311(22). 2014.
20. Rezayatmand R, Pavlova M and Groot W. [The impact of out-of-pocket payments on prevention and health-related lifestyle: a systematic literature review](#). Eur. J. Public Health. 23(1). 2013.
21. Berkeley Research Group. [The Pharmaceutical Supply Chain, 2013–2023](#). 2025.
22. U.S. Health Resources and Services Administration (HRSA). [2024 340B Covered Entity Purchases](#).
23. Mathews A, Overberg P, Walker J and McGinty T. [Many hospitals get big drug discounts. That doesn't mean markdowns for patients](#). The Wall Street Journal. 2022. Last accessed December 5, 2025.
24. Lin J, Li P, Doshi J, Desai S. [Assessment of US Pharmacies Contracted With Health Care Institutions Under the 340B Drug Pricing Program by Neighborhood Socioeconomic Characteristics](#). JAMA Health Forum. 2022.
25. Coughlin M and Mishra D. [Local population characteristics and access equity of 340B contract pharmacies](#). Health Affairs Scholar, Volume 3. Issue 7, July 2025.

## About the authors



**CHUAN SUN, MS, MA**

IQVIA Market Access  
Technology Solutions

Chuan comes from a mixed background of economics, data science, and finance. His passion is to combine different data sources to derive insights about the U.S. healthcare system.



**RORY MARTIN, PhD**

IQVIA Market Access  
Technology Solutions

Rory uses advanced analytics to create innovative Gross to Net strategies and solutions to help manufacturers accelerate portfolio growth. He has been an invited speaker at the FDA's Center for Drug Evaluation and Research (CDER) and is the author of several analytics texts.



**HARISH KARNE, MS**

IQVIA Market Access  
Technology Solutions

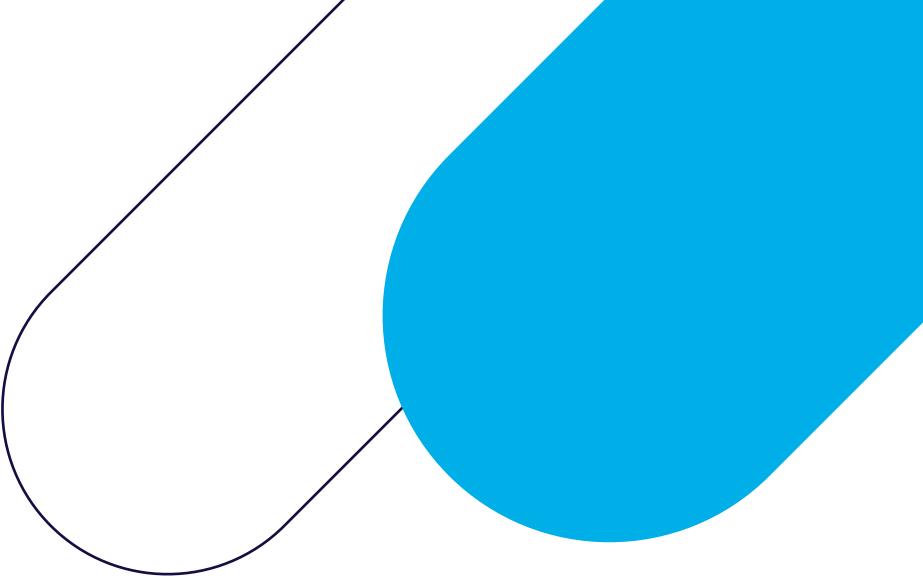
Harish applies data science techniques to draw insights from large data sets, and implements innovative methods to aid Gross to Net efforts at IQVIA. He has a background in scientific research and publications.

## Acknowledgements

We thank Luke Greenwalt and several anonymous reviewers for their helpful suggestions.

## Funding

This study was supported by Novartis which reviewed the manuscript and provided feedback, but had no role in data collection, analysis, or the decision to publish. Full editorial control was retained by IQVIA.



---

**CONTACT US**  
[iqvia.com](http://iqvia.com)