

Medicaid Pharmacy Savings Opportunities: National and State-Specific Estimates

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I. Executive Summary

This study examines whether the full range of pharmacy benefit management (PBM) tools are being allowed and used in Medicaid and whether additional savings are possible if PBM tools were employed to a greater extent. Based on a comprehensive analysis of CMS Medicaid data, we conclude that the entire range of PBM tools are generally not being fully allowed and used and that substantial savings are possible from their broader application.

In recent years, factors such as rising drug costs and the Affordable Care Act (which expanded Medicaid and enabled states to retain drug manufacturer rebates even when Medicaid managed care plans cover prescription drugs) have encouraged greater use of PBM cost-saving tools in Medicaid. Nonetheless, the broad adoption and full application of PBM tools has evolved more slowly in Medicaid than in the commercial market. For example, in many states, traditional¹ Medicaid pharmacy payment rates are still not negotiated with pharmacies but set by state officials, often at rates much higher than those of other large payers.

This study explores how using the full range of PBM tools—without making changes to federal and state supplemental drug manufacturer rebates—could save Medicaid an additional \$51.1 billion over the next decade. That’s \$33.4 billion in federal savings and another \$17.7 billion in savings for the states.

It’s important to note that the use of PBM tools is not synonymous with simply contracting with Managed Care Organizations (MCOs) or Pharmacy Benefit Managers (PBMs). Many state governments—even those that retain MCOs to manage major medical costs or PBMs to manage pharmacy benefits—still restrict the use of basic cost-savings tools. For example, some states require MCOs to administer a state-developed formulary rather than allowing them to manage their own formularies as do most commercial-sector plans. At the same time, other states use a traditional administrative approach but do allow other PBM tools to be used to manage costs and quality.

Experience suggests that Medicaid programs could allow the use of PBM tools to a greater extent while quality is maintained or improved for the unique and vulnerable populations that Medicaid serves. Likewise, there is no compelling evidence that restricting the use of PBM tools benefits patients. In short, this is a budgetary opportunity for policymakers seeking to reduce overall costs or find savings to re-apply toward more robust and sustainable Medicaid benefits.

¹ Throughout this report, the term “traditional” Medicaid refers to fee-for-service (FFS), in which the state Medicaid program directly pays providers for each covered service a Medicaid beneficiary receives.

II. Using the Full Range of PBM Tools in Medicaid

Over the past several years, many traditional Medicaid programs have expanded the use of PBM tools, but most still do not use the full range of tools to the same degree as high-performing plans in the commercial sector.^{2,3} Likewise, the use of competitive network pharmacy contracting approaches across all Medicaid is much lower than in the commercial sector.

To estimate the potential impact of increased pharmacy benefit management across all Medicaid programs, we modeled the impact of moving performance in four key areas to levels found in high-performing commercial-sector programs: pharmacy reimbursements (across ingredient cost and dispensing fee components); encouraging the use of generics and more affordable brands; reducing fraud, waste, and abuse; and utilizing lower-cost pharmacy options.

Using the full range of PBM tools and strategies in state Medicaid programs nationwide could save \$51.1 billion across the 10-year period 2017–2026, including \$33.4 billion in federal savings and \$17.7 billion in state savings.

While there would be new administrative costs associated with implementing PBM tools, we estimate that the potential savings would far exceed these marginal administrative costs.

Negotiating Market-Based Pharmacy Reimbursements

Traditional Medicaid programs commonly reimburse pharmacies at a higher combination of unit prices (taking into account dispensing fees and ingredient costs) than do market-based programs administered by pharmacy benefit managers (PBMs).

- CMS has recently required that states adopt an Actual Acquisition Cost (AAC) methodology in paying pharmacies. This approach involves paying a much higher dispensing fee than is already occurring (typically above \$10), with the ingredient payment presumably being passed through with little or no margin to the pharmacy. A few specific examples of dispensing fees under the AAC approach are \$9.47 in Nevada, \$10.00 in Delaware, and \$11.73 in Iowa. Some states have a range of dispensing fees (e.g., \$9.31–\$14.41 in Colorado) depending on a pharmacy’s Medicaid volume and urban versus rural locations.

² As a proxy for high-performing commercial-sector plans, we have used performance in capitated Medicaid health plans in our modeling relative to all PBM tools except for pharmacy networks, where performance in Medicare Prescription Drug Plans (PDPs) was used.

³ Potential differences in health between traditional Medicaid and commercial sector populations have not been examined in this study and could have an impact on the implementation of PBM tools.

- The AAC approach may result in higher pharmacy reimbursements than the already higher-than-average reimbursements characteristic of traditional Medicaid programs. In other words, some states may find themselves paying a much higher dispensing fee, without realizing equally significant reductions in ingredient costs.
- If all traditional state Medicaid programs were to align pharmacy reimbursements with competitive levels in the commercial sector, Medicaid would save \$9.0 billion over the next 10 years.

Encouraging the Use of Generics and More Affordable Brands

PBM-administered programs in Medicaid focus on encouraging the use of clinically appropriate drugs with the lowest net cost after all discounts (including federal and supplemental rebates) have been taken into account.⁴ Generics are typically (but not always) the lowest net cost products.⁵ Many Medicaid programs could achieve substantial savings if they were to move toward the reimbursement and drug mix levels found in high-performing commercial-sector plans using the full range of PBM tools.

- Nationwide in 2015, generic drugs represented 83.4% of prescriptions in actively-managed Medicaid settings⁶ versus 78.5% of prescriptions in traditional Medicaid settings.
- In aggregate, each percentage point increase in the generic dispensing rate yields a 3% reduction in net prescription drug costs, based on the average net costs per brand and generic prescription in Medicaid in 2015.
- **Medicaid could save \$26.5 billion over the next 10 years by optimizing the use of generic drugs.**
- In 2015, the average initial (pre-rebate) cost of a brand prescription in highly-managed Medicaid settings was \$304, compared to \$372 in traditional Medicaid. After rebates are collected, the average net costs for a brand prescription during 2015 were \$133 in highly managed Medicaid settings versus \$162 in traditional Medicaid.
- States that adopt a cost management strategy focused more on maximizing manufacturer rebates rather than managing drug mix tend to have considerably higher net costs per prescription on average. In 2014, the 17 states with the highest manufacturer rebates per prescription had overall net prescription costs that were 32% above the 17 states with the highest generic dispensing rates (GDR).

⁴ In traditional Medicaid programs, PBMs are typically paid an administration fee to support drug management programs.

⁵ It is important to note that in the case of authorized generics or generic products in the 180-day exclusivity period, statutory and supplemental rebates may result in the lowest net cost product being the brand, thus a strategy of encouraging the generic in these particular cases would not be advantageous.

⁶ We have cited data for capitated Medicaid health plans to represent actively-managed Medicaid settings.

- **Medicaid could save \$2.4 billion over the next 10 years through the use of more affordable brand drugs.**

The statutory and supplemental rebates paid to Medicaid by brand-name manufacturers are determined separately from pharmacy dispensing fees and ingredient cost reimbursements. Increasing generic drug utilization will reduce drug manufacturer rebates, but will still generate net savings of \$26.5 billion. Although an increase in the use of generics reduces the use of brand drugs and the related rebate income they generate for states, the net savings to Medicaid programs are nonetheless enormous, as reflected in our savings estimate.

In terms of using more affordable brand drugs, it should be noted that the antiquated practice of exempting entire classes of drugs from Preferred Drug List (PDL) reviews is still taking place in Medicaid.⁷ PDL reviews—where drugs are reviewed based on their clinical and economic merits relative to other medications in the same therapeutic class—allow for the effective implementation of Prior Authorization (PA) protocols that encourage both safe and cost-effective drug utilization.

Reducing Fraud, Waste, and Abuse

While traditional Medicaid programs have some mechanisms in place to identify potential fraud, waste, and abuse, these mechanisms typically are not as sophisticated as those used by PBMs in an environment where the pharmacy benefit is being comprehensively analyzed and managed. If Medicaid used tools such as step therapy and audits to help detect and avoid inappropriate utilization, we estimate that **\$1.9 billion could be saved over the next ten years in reduced drug diversion, polypharmacy, fraud, and waste.**

Utilizing Lower-Cost Pharmacy Options

In most traditional state Medicaid programs, every drugstore in the state is entitled to participate. State Medicaid programs could achieve greater savings by implementing competitive pharmacy contracting processes that characterize Medicare Part D and commercial-sector programs.

- In Medicare Part D, preferred pharmacy options have demonstrated savings of 6.1%.^{8,9}
- **By using a competitive process and negotiating better discounts from drugstores that wish to participate in more selective pharmacy networks, Medicaid could save \$11.4 billion over the next ten years.**

Additional savings may be possible through the use of specialty pharmacy networks and mail-service pharmacies. For example, The Pennsylvania Medicaid program implemented a specialty

⁷ Magellan Rx Management, “Medicaid Trend Report: 2016 Edition,” September 2016.

⁸ CMS, “Part D Claims Analysis: Negotiated Pricing Between Preferred and Non-Preferred Pharmacy Networks,” April 30, 2013.

⁹ Drug Channels, “New CMS Study: Preferred Pharmacy Networks are Cheaper (Except When They’re Not),” July 2013.

pharmacy network that saved the state 16% on specialty drugs and also reduced overall per month expenditures per beneficiary and inpatient hospital costs for patients using specialty drugs.¹⁰

To date, the use of mail-service pharmacies in both traditional and Managed Medicaid has been limited due to the perception of beneficiaries' unstable eligibility. However, some states are contemplating greater use of mail-service pharmacies for beneficiaries with long-term eligibility and stable housing. For example, a recent report by the State of Maryland concludes that Medicaid has the opportunity to "better manage cost and care through the implementation of more cost effective pharmacy networks and mail order pharmacies."¹¹

III. State-by-State Savings Estimates

Baseline 2015 Medicaid costs in the traditional (fee-for-service) coverage settings are presented in Exhibit 1.

Anticipated savings from using the full range of PBM tools in 2017 in each state are shown in Exhibit 2. Nationwide, we estimate potential savings in 2017 at \$3.5 billion.

The projected percentage Medicaid savings estimates across the upcoming ten-year period are shown in Exhibit 3. Projections are shown for each state and each component (e.g., competitive dispensing fees, optimal use of generics, etc.). As shown in the bottom row of Exhibit 3, across the 10-year time frame (2017–2026), nationwide Medicaid savings of \$51.1 billion are projected.

The degree to which various components will yield savings varies considerably by state. Nationwide, the largest component would be optimal use of generics, accounting for 52% of the total \$51.1 billion savings.

¹⁰ Kaiser Commission on Medicaid and the Uninsured, "Managing Medicaid Pharmacy Benefits: Current Issues and Options," September 2011.

¹¹ Maryland Department of Health and Mental Hygiene, "Ensuring Maryland Medical Assistance Program Recipients Enrolled in Managed Care Organizations Have Reasonable Access to Pharmacy Services," December 2015.

Exhibit 1. Pharmacy Costs and Generic Dispensing Rates in Traditional Medicaid Setting

State	Percentage of Medicaid Prescriptions Paid via Traditional Medicaid (Fee-For-Service), 2015	Generic Dispensing Rate of Prescriptions Paid for in Traditional Medicaid Setting, 2015
Alaska	100%	79.1%
Alabama	100%	77.8%
Arkansas	100%	80.3%
Arizona	1%	83.0%
California	39%	74.4%
Colorado	100%	81.1%
Connecticut	100%	74.5%
District of Columbia	40%	79.9%
Delaware	27%	78.5%
Florida	12%	74.8%
Georgia	45%	81.1%
Hawaii	0%	90.7%
Iowa	99%	80.2%
Idaho	100%	79.1%
Illinois	53%	82.5%
Indiana	71%	78.3%
Kansas	0%	76.1%
Kentucky	7%	84.7%
Louisiana	28%	77.0%
Massachusetts	49%	82.1%
Maryland	31%	75.5%
Maine	100%	75.3%
Michigan	33%	79.5%
Minnesota	24%	81.6%
Missouri	100%	78.9%
Mississippi	39%	75.1%
Montana	100%	77.9%

State	Percentage of Medicaid Prescriptions Paid via Traditional Medicaid (Fee-For-Service), 2015	Generic Dispensing Rate of Prescriptions Paid for in Traditional Medicaid Setting, 2015
North Carolina	100%	73.1%
North Dakota	63%	80.8%
Nebraska	96%	82.2%
New Hampshire	15%	81.3%
New Jersey	4%	82.4%
New Mexico	3%	81.6%
Nevada	45%	80.8%
New York	15%	84.4%
Ohio	14%	76.7%
Oklahoma	100%	80.2%
Oregon	23%	87.6%
Pennsylvania	7%	87.1%
Rhode Island	100%	80.6%
South Carolina	17%	78.0%
South Dakota	100%	75.9%
Tennessee	97%	81.1%
Texas	13%	68.7%
Utah	46%	80.3%
Virginia	20%	77.1%
Vermont	100%	75.5%
Washington	16%	85.2%
Wisconsin	99%	78.6%
West Virginia	79%	82.4%
Wyoming	100%	79.3%
US Total	38%	78.5%

Above statistics tabulated using CMS State Drug Utilization data files. The source data are available at: <https://www.medicaid.gov/medicaid-chip-program-information/by-topics/benefits/prescription-drugs/state-drug-utilization-data.html>

Exhibit 2. Projected Medicaid Savings from Use of the Full Range of PBM Tools/Strategies by State, 2017

State	Prescription Drug Costs in Traditional Medicaid (FFS) Setting, FFY2017	FFY2017 Medicaid Savings Estimate by State and PBM Management Tool					Total Savings	% Savings Against Baseline Costs
		Savings From PBM Pharmacy Price Negotiations	Improved Use of Generics	Utilize Lower-Cost Brands (within brands)	Reduced Polypharmacy, Fraud, Waste and Abuse	Utilize Limited Pharmacy Networks		
Alaska	\$56,834,402	\$2,660,578	\$4,766,836	\$603,739	\$568,344	\$3,466,899	\$12,066,395	21%
Alabama	\$388,397,450	\$20,886,975	\$36,711,450	\$4,777,723	\$3,883,975	\$23,692,244	\$89,952,368	23%
Arkansas	\$223,420,233	\$14,464,429	\$18,731,908	\$2,213,796	\$2,234,202	\$13,628,634	\$51,272,970	23%
Arizona	\$12,146,275	\$384,061	\$2,264,877	\$179,654	\$121,463	\$740,923	\$3,690,978	30%
California	\$2,702,506,278	\$76,194,544	\$313,837,900	\$44,455,958	\$27,025,063	\$164,852,883	\$626,366,348	23%
Colorado	\$402,463,352	\$21,274,412	\$39,778,368	\$4,244,833	\$4,024,634	\$24,550,264	\$93,872,511	23%
Connecticut	\$678,171,174	\$25,392,521	\$67,388,747	\$9,992,251	\$6,781,712	\$41,368,442	\$150,923,673	22%
District of Columbia	\$47,302,280	\$2,532,425	\$6,165,698	\$649,560	\$473,023	\$2,885,439	\$12,706,146	27%
Delaware	\$24,672,967	\$1,939,930	\$829,104	\$169,341	\$246,730	\$1,505,051	\$4,690,156	19%
Florida	\$341,902,623	\$9,859,239	\$38,291,317	\$5,380,666	\$3,419,026	\$20,856,060	\$77,806,308	23%
Georgia	\$448,114,952	\$21,317,583	\$67,542,117	\$6,366,038	\$4,481,150	\$27,335,012	\$127,041,900	28%
Hawaii	\$810,092	\$26,796	\$48,896	\$10,519	\$8,101	\$49,416	\$143,728	18%
Iowa	\$245,400,259	\$18,651,480	\$25,178,603	\$2,797,612	\$2,454,003	\$14,969,416	\$64,051,114	26%
Idaho	\$105,948,578	\$6,162,826	\$11,243,615	\$1,318,235	\$1,059,486	\$6,462,863	\$26,247,025	25%
Illinois	\$447,736,370	\$29,222,601	\$54,736,316	\$4,970,486	\$4,477,364	\$27,311,919	\$120,718,685	27%
Indiana	\$486,389,745	\$24,639,227	\$50,046,380	\$6,188,615	\$4,863,897	\$29,669,774	\$115,407,894	24%
Kansas	\$634,083	\$38,970	\$59,794	\$8,457	\$6,341	\$38,679	\$152,241	24%

Exhibit 2 (continued). Projected Medicaid Savings from Use of the Full Range of PBM Tools/Strategies by State, 2017

State	Prescription Drug Costs in Traditional Medicaid (FFS) Setting, FFY2017	FFY2017 Medicaid Savings Estimate by State and PBM Management Tool					Total Savings	% Savings Against Baseline Costs
		Savings From PBM Pharmacy Price Negotiations	Improved Use of Generics	Utilize Lower-Cost Brands (within brands)	Reduced Polypharmacy, Fraud, Waste and Abuse	Utilize Limited Pharmacy Networks		
Kentucky	\$58,592,135	\$3,800,712	\$16,247,972	\$559,624	\$585,921	\$3,574,120	\$24,768,350	42%
Louisiana	\$144,509,956	\$8,641,278	\$11,173,904	\$1,631,239	\$1,445,100	\$8,815,107	\$31,706,628	22%
Massachusetts	\$386,517,811	\$19,602,420	\$53,510,638	\$4,825,022	\$3,865,178	\$23,577,586	\$105,380,845	27%
Maryland	\$260,583,030	\$12,021,579	\$8,451,187	\$2,053,714	\$2,605,830	\$15,895,565	\$41,027,875	16%
Maine	\$130,154,479	\$7,635,043	\$12,410,890	\$1,808,056	\$1,301,545	\$7,939,423	\$31,094,957	24%
Michigan	\$535,095,779	\$25,016,086	\$61,429,432	\$6,869,249	\$5,350,958	\$32,640,843	\$131,306,567	25%
Minnesota	\$153,930,336	\$7,794,203	\$17,582,525	\$1,729,593	\$1,539,303	\$9,389,750	\$38,035,375	25%
Missouri	\$832,582,410	\$34,169,154	\$82,898,093	\$10,029,167	\$8,325,824	\$50,787,527	\$186,209,765	22%
Mississippi	\$159,915,546	\$6,662,165	\$13,381,737	\$2,061,868	\$1,599,155	\$9,754,848	\$33,459,773	21%
Montana	\$74,224,572	\$3,429,679	\$8,557,602	\$1,040,260	\$742,246	\$4,527,699	\$18,297,486	25%
North Carolina	\$956,978,711	\$47,897,464	\$81,588,436	\$13,514,297	\$9,569,787	\$58,375,701	\$210,945,686	22%
North Dakota	\$30,506,247	\$1,629,368	\$3,363,976	\$352,406	\$305,062	\$1,860,881	\$7,511,693	25%
Nebraska	\$109,994,090	\$6,942,698	\$13,565,705	\$1,254,041	\$1,099,941	\$6,709,640	\$29,572,023	27%
New Hampshire	\$8,989,087	\$764,181	\$1,182,358	\$114,067	\$89,891	\$548,334	\$2,698,830	30%
New Jersey	\$31,128,256	\$1,868,179	\$4,247,099	\$376,928	\$311,283	\$1,898,824	\$8,702,312	28%
New Mexico	\$8,489,287	\$461,211	\$848,048	\$86,834	\$84,893	\$517,847	\$1,998,833	24%
Nevada	\$166,465,401	\$6,991,608	\$25,002,202	\$2,404,792	\$1,664,654	\$10,154,389	\$46,217,645	28%
New York	\$471,167,966	\$28,158,441	\$149,096,739	\$4,809,941	\$4,711,680	\$28,741,246	\$215,518,046	46%

Exhibit 2 (continued). Projected Medicaid Savings from Use of the Full Range of PBM Tools/Strategies by State, 2017

State	Prescription Drug Costs in Traditional Medicaid (FFS) Setting, FFY2017	FFY2017 Medicaid Savings Estimate by State and PBM Management Tool					Total Savings	% Savings Against Baseline Costs
		Savings From PBM Pharmacy Price Negotiations	Improved Use of Generics	Utilize Lower-Cost Brands (within brands)	Reduced Polypharmacy, Fraud, Waste and Abuse	Utilize Limited Pharmacy Networks		
Ohio	\$324,014,163	\$14,549,016	\$38,161,743	\$4,881,952	\$3,240,142	\$19,764,864	\$80,597,717	25%
Oklahoma	\$325,298,590	\$16,822,617	\$39,043,134	\$4,147,460	\$3,252,986	\$19,843,214	\$83,109,410	26%
Oregon	\$106,460,157	\$6,512,872	\$15,915,947	\$1,034,633	\$1,064,602	\$6,494,070	\$31,022,123	29%
Pennsylvania	\$50,576,039	\$5,321,919	\$9,659,534	\$539,030	\$505,760	\$3,085,138	\$19,111,382	38%
Rhode Island	\$128,854,070	\$7,362,831	\$15,892,680	\$1,626,491	\$1,288,541	\$7,860,098	\$34,030,641	26%
South Carolina	\$67,261,797	\$3,389,913	\$7,431,426	\$911,007	\$672,618	\$4,102,970	\$16,507,934	25%
South Dakota	\$60,102,053	\$2,279,818	\$6,814,776	\$914,262	\$601,021	\$3,666,225	\$14,276,102	24%
Tennessee	\$467,466,362	\$35,075,201	\$53,469,341	\$5,452,124	\$4,674,664	\$28,515,448	\$127,186,777	27%
Texas	\$190,252,668	\$13,748,313	\$9,185,938	\$2,303,223	\$1,902,527	\$11,605,413	\$38,745,413	20%
Utah	\$68,426,636	\$3,777,157	\$6,783,519	\$756,952	\$684,266	\$4,174,025	\$16,175,919	24%
Virginia	\$95,413,715	\$5,733,531	\$2,716,645	\$665,363	\$954,137	\$5,820,237	\$15,889,913	17%
Vermont	\$113,332,689	\$4,492,521	\$8,837,637	\$1,373,589	\$1,133,327	\$6,913,294	\$22,750,368	20%
Washington	\$78,872,121	\$6,417,418	\$9,431,151	\$440,492	\$788,721	\$4,811,199	\$21,888,982	28%
Wisconsin	\$635,179,588	\$32,643,511	\$71,691,276	\$8,455,337	\$6,351,796	\$38,745,955	\$157,887,876	25%
West Virginia	\$247,846,494	\$20,488,262	\$30,949,321	\$2,819,523	\$2,478,465	\$15,118,636	\$71,854,207	29%
Wyoming	\$28,761,625	\$1,482,219	\$3,376,614	\$379,030	\$287,616	\$1,754,459	\$7,279,938	25%
US TOTAL	\$14,120,794,975	\$679,231,183	\$1,631,521,154	\$186,549,051	\$141,207,950	\$861,368,493	\$3,499,877,831	25%
Federal Savings	\$9,220,879,119	\$443,537,963	\$1,065,383,313	\$121,816,530	\$92,208,791	\$562,473,626	\$2,285,420,224	25%
State Savings	\$4,899,915,856	\$235,693,221	\$566,137,840	\$64,732,521	\$48,999,159	\$298,894,867	\$1,214,457,607	25%

Exhibit 3. Projected Percentage Medicaid Savings Distribution by PBM Tool/Strategy and by State, 2017–2026; States Shown Alphabetically (Alaska through Kansas shown below)

State	Ten-Year Percentage Medicaid Savings Estimate by State and PBM Management Tool, FFY2017 - FFY2026					
	PBM Pharmacy Price Negotiations	Improved Use of Generics	Utilize Lower-Cost Brands (within brands)	Reduced Polypharmacy, Fraud, Waste and Abuse	Utilize Limited Pharmacy Networks	Total Savings
Alaska	4.7%	11.3%	1.0%	1.0%	6.1%	24.1%
Alabama	5.4%	11.1%	1.2%	1.0%	6.1%	24.8%
Arkansas	6.6%	12.9%	0.9%	1.0%	6.1%	27.4%
Arizona	3.3%	27.4%	1.2%	1.0%	6.1%	39.0%
California	2.8%	13.2%	1.6%	1.0%	6.1%	24.7%
Colorado	5.4%	16.2%	0.9%	1.0%	6.1%	29.6%
Connecticut	3.7%	11.4%	1.5%	1.0%	6.1%	23.7%
District of Columbia	5.4%	18.4%	1.2%	1.0%	6.1%	32.1%
Delaware	7.9%	4.4%	0.7%	1.0%	6.1%	20.1%
Florida	2.8%	12.8%	1.6%	1.0%	6.1%	24.3%
Georgia	4.8%	24.0%	1.2%	1.0%	6.1%	37.2%
Hawaii	3.1%	6.4%	1.4%	1.0%	6.1%	18.0%
Iowa	7.7%	15.7%	1.0%	1.0%	6.1%	31.5%
Idaho	5.8%	14.1%	1.2%	1.0%	6.1%	28.2%
Illinois	6.7%	18.6%	0.9%	1.0%	6.1%	33.3%
Indiana	5.1%	12.1%	1.2%	1.0%	6.1%	25.5%
Kansas	6.1%	11.0%	1.3%	1.0%	6.1%	25.5%

Exhibit 3 (continued). Projected Percentage Medicaid Savings Distribution by PBM Tool/Strategy and by State, 2017–2026; States Shown Alphabetically (Kentucky through New York shown below)

State	Ten-Year Percentage Medicaid Savings Estimate by State and PBM Management Tool, FFY2017 - FFY2026					
	PBM Pharmacy Price Negotiations	Improved Use of Generics	Utilize Lower-Cost Brands (within brands)	Reduced Polypharmacy, Fraud, Waste and Abuse	Utilize Limited Pharmacy Networks	Total Savings
Kentucky	6.8%	19.7%	1.2%	1.0%	6.1%	34.8%
Louisiana	6.0%	9.2%	1.1%	1.0%	6.1%	23.4%
Massachusetts	5.2%	22.1%	1.0%	1.0%	6.1%	35.4%
Maryland	4.6%	4.2%	0.8%	1.0%	6.1%	16.7%
Maine	5.8%	11.1%	1.4%	1.0%	6.1%	25.3%
Michigan	4.7%	15.0%	1.2%	1.0%	6.1%	28.0%
Minnesota	5.2%	18.6%	0.9%	1.0%	6.1%	31.7%
Missouri	4.1%	11.8%	1.2%	1.0%	6.1%	24.2%
Mississippi	4.1%	9.8%	1.3%	1.0%	6.1%	22.3%
Montana	4.6%	13.4%	1.4%	1.0%	6.1%	26.5%
North Carolina	4.9%	9.8%	1.4%	1.0%	6.1%	23.3%
North Dakota	5.4%	17.2%	1.0%	1.0%	6.1%	30.7%
Nebraska	6.5%	19.5%	0.9%	1.0%	6.1%	34.0%
New Hampshire	8.6%	20.7%	1.1%	1.0%	6.1%	37.5%
New Jersey	6.1%	20.9%	1.0%	1.0%	6.1%	35.2%
New Mexico	5.5%	16.3%	0.8%	1.0%	6.1%	29.8%
Nevada	4.3%	23.1%	1.2%	1.0%	6.1%	35.7%
New York	6.2%	23.2%	1.2%	1.0%	6.1%	37.7%

Exhibit 3 (continued). Projected Percentage Medicaid Savings Distribution by PBM Tool/Strategy and by State, 2017–2026; States Shown Alphabetically (Ohio through Wyoming shown below)

State	Ten-Year Percentage Medicaid Savings Estimate by State and PBM Management Tool, FFY2017 - FFY2026					
	PBM Pharmacy Price Negotiations	Improved Use of Generics	Utilize Lower-Cost Brands (within brands)	Reduced Polypharmacy, Fraud, Waste and Abuse	Utilize Limited Pharmacy Networks	Total Savings
Ohio	4.4%	13.6%	1.5%	1.0%	6.1%	26.6%
Oklahoma	5.2%	18.2%	1.1%	1.0%	6.1%	31.7%
Oregon	6.3%	7.9%	1.2%	1.0%	6.1%	22.5%
Pennsylvania	11.0%	10.3%	1.3%	1.0%	6.1%	29.7%
Rhode Island	5.8%	19.4%	1.1%	1.0%	6.1%	33.4%
South Carolina	5.0%	12.9%	1.3%	1.0%	6.1%	26.4%
South Dakota	3.7%	13.0%	1.5%	1.0%	6.1%	25.4%
Tennessee	7.6%	18.6%	1.0%	1.0%	6.1%	34.3%
Texas	7.0%	5.8%	1.2%	1.0%	6.1%	21.1%
Utah	5.6%	15.1%	1.0%	1.0%	6.1%	28.7%
Virginia	6.0%	3.8%	0.7%	1.0%	6.1%	17.6%
Vermont	3.9%	9.2%	1.2%	1.0%	6.1%	21.4%
Washington	8.4%	8.0%	0.7%	1.0%	6.1%	24.3%
Wisconsin	5.1%	13.2%	1.3%	1.0%	6.1%	26.8%
West Virginia	8.5%	19.3%	0.9%	1.0%	6.1%	35.8%
Wyoming	5.2%	15.4%	1.2%	1.0%	6.1%	28.9%
US TOTAL	4.8%	14.2%	1.3%	1.0%	6.1%	27.3%
Total Dollar Savings	\$8,982,714,558	\$26,475,401,676	\$2,369,491,866	\$1,868,515,223	\$11,397,942,863	\$51,094,066,187
Federal Savings	\$5,865,712,606	\$17,288,437,294	\$1,547,278,189	\$1,220,140,441	\$7,442,856,690	\$33,364,425,220
State Savings	\$3,117,001,952	\$9,186,964,381	\$822,213,678	\$648,374,783	\$3,955,086,174	\$17,729,640,967

IV. Methodology

Savings estimates were derived in each state across the 10-year time frame 2017–2026. The modeling effort assembled baseline Medicaid pharmacy usage costs for fiscal year (FY) 2015, and then estimated how these figures would progress in each year through 2026 in the absence of strengthened benefits management. The Menges Group then applied an array of pharmacy cost management savings factors to these baseline figures to derive estimated savings in each state and year. The methodology used is described in detail below.

Baseline Data Compilation: The Menges Group downloaded and utilized Centers for Medicare & Medicaid Services (CMS) data on Medicaid fee-for-service (FFS) pharmacy usage and costs from the state drug utilization data files.¹² The information in these data files was used to establish a baseline volume of Medicaid prescriptions, the brand/generic mix of these prescriptions, and the total expenditure of these prescriptions. For each state, the following baseline information was obtained, tabulated, or estimated for FY2015:

- Number of Medicaid FFS prescriptions: brand, generic, and total
- Average total unit cost for Medicaid FFS prescriptions—brand, generic, and total
- Total expenditures for Medicaid FFS prescriptions—brand, generic, and total
- Volume of prescriptions paid for by Medicaid Managed Care Organizations (MCOs)

Brand medications represented only 21.5% of all Medicaid FFS prescriptions during FFY2015, but they represented 80.2% of all Medicaid payments to pharmacies.

Annual Trending of Costs and Usage from 2017 to 2026: The Menges Group trended the baseline costs and usage to CY2026 using the following annual assumptions:

- Prescription volume was trended upward at an annual rate of 1.02%. This trend factor represents the average projected annual growth in the national Medicaid population from 2015 to 2026 based on estimates made by the Congressional Budget Office.¹³ No changes in baseline prescription volume per beneficiary were assumed.
- The mix of Medicaid FFS prescriptions is projected to continually evolve toward generics. Each state’s baseline 2015 generic dispensing rate (GDR) was increased by 0.5 percentage points each year through 2026. The GDR was capped at 91% if and when our baseline trending assumptions took a state to this level, based on the maximum GDR currently observed in capitated Medicaid health plans using best practices.

¹² The state drug utilization data were typically available into FY2015.

¹³ Based on numbers presented in The CBO Report, “The Budget and Economic Outlook: 2016 to 2026,” January, 2016, available at: https://www.cbo.gov/sites/default/files/114th-congress-2015-2016/reports/51129-2016Outlook_OneCol-2.pdf

- Prescription brand drug unit costs were trended upward by 8% annually, while generic unit costs were increased by 4% annually. During the past two years, Medicaid costs per prescription have risen much more sharply – after factoring rebates, costs per prescription increased 12.8% from 2013-2014 and 11.5% from 2014-2015. We do not expect costs to continue to increase at this level, but the introduction of high-cost, specialty drugs is likely to result in a relatively large average cost per brand drug persisting for at least the next several years.

The Menges Group projects that roughly \$27 billion will be paid to pharmacies in the Medicaid FFS setting nationwide during FFY2017, with these FFS costs exceeding \$350 billion across the 10-year time frame 2017–2026.

Manufacturer Rebates: To derive net governmental savings, it is necessary to factor in the rebates that drug manufacturers must pay to the federal government under the provisions of the Affordable Care Act. Using reports made available by CMS for FFY2015 we tabulated or estimated the brand and generic rebate rates for each state.¹⁴ These rebates vary from drug to drug but are far higher, on average, for brand medications than for generics. The savings estimates presented in this paper are based on CMS-64 reports that capture all statutory rebates and supplemental rebates. However, the rebate data that are publicly available are aggregated across all drugs. Drug-specific statutory and supplemental rebates can vary considerably. Thus, while the data sources used permit valid net cost tabulations to be produced at the state-wide level for all drugs, these tabulations may not be applicable for specific drugs or therapeutic classes.

As one example, in the case of authorized generics or generic products in the 180-day exclusivity period, statutory and supplemental rebates may result in the lowest net cost product being the brand. A strategy of encouraging the generic for this drug during this time frame would not be advantageous. Another example is that the supplemental rebates negotiated with a manufacturer for a given drug could be so large that a seemingly cost-increasing drug becomes a state's most cost-effective option.

Medicaid Managed Care Program Changes: The percentage mix of each state's Medicaid prescriptions between FFS-paid and MCO-paid was held constant throughout the projections at the observed FFY2015 baseline. Nationwide, 62.5% of Medicaid prescriptions were paid by MCOs during FFY2015.

Savings from use of the full range of PBM tools were assumed to occur from the following areas:

Initial Payment Rates to Pharmacies: Each state's Medicaid FFS dispensing fee was assumed to decrease by \$2.00 under an optimally managed program in 2011 dollars. This \$2.00 figure for 2011 was inflated by 5% per year in each subsequent year throughout the projections. This level

¹⁴ <https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidBudgetExpenseSystem/CMS-64-Quarterly-Expense-Report.html>

of savings is based on our prior PCMA report.¹⁵ States have been required by CMS to move to an “Actual Acquisition Cost” (AAC) methodology to pay for FFS Medicaid prescriptions. This new methodology may or may not impact net prescription drug costs, and these impacts could be favorable or unfavorable based on actual payment *rates*. The AAC methodology itself neither creates an expectation of higher costs or lower costs. For this reason, we have assumed that the unit price savings opportunities that existed in the pre-AAC environment continue to exist in the AAC setting.

Drug Mix: Each state’s baseline generic dispensing rate in a given year is assumed to increase steadily over the previous year due to patent expirations. These generic dispensing rates were increased by four percentage points in each state with the introduction of the active pharmacy benefits management and were capped at 92%. (Note that we assumed a slightly lower generic usage “ceiling” of 91% in the FFS setting than in the MCO setting.) In addition to the volume shift toward generics, The Menges Group has also factored in an estimate that when brands are used, the mix will shift toward relatively low cost brand medications. This was factored into the model by assuming a 2.5% reduction in the average ingredient unit price of all brand medications relative to the baseline. We tabulated of average costs per brand prescription during 2013 across five large states where the vast majority of prescriptions were paid by MCOs, and compared this figure (\$98.56) with average across five large states with little or no MCO-paid prescriptions (\$102.31). This assessment yielded an average cost difference of 3.7% per brand drug in the MCO-dominant states. This MCO cost differential attributable to drug mix is reduced to 2.9% once we adjusted that data for the initial unit price savings MCOs are achieving in their payments to pharmacies (described earlier). Our assumed savings of 2.5% for this component is slightly lower than the derived 2.9% differential.

These drug mix savings were applied only to Medicaid FFS prescriptions; it is assumed that the Medicaid MCO drug mix is already being actively managed by these health plans’ PBM subcontractors.

Reduced Polypharmacy, Fraud, Waste, and Abuse: The Government Accountability Office (GAO) has identified Medicaid as a program at high risk for improper payments because of its vulnerability to fraud, waste, and abuse.¹⁶ In 2015, improper payments accounted for nearly 10% of Medicaid expenditures.¹⁷ While a precise estimate of improper payments for prescription drug claims is not available, fraud and abuse related to prescription opioids has been well documented in Medicaid. We have assumed a 1% reduction in baseline FFS prescription volume in each state based on our expectation that in an actively managed environment, PBMs will better detect and prevent polypharmacy, fraud, waste, and abuse, including excessive/inappropriate prescribing in areas such as narcotic painkillers.

¹⁵ “Medicaid Pharmacy Savings Opportunities: National and State-Specific Estimates,” May 2013, prepared by The Menges Group for the Pharmaceutical Care Management Association.

¹⁶ Government Accountability Office, “National Medicaid Audit Program,” June 2012.

¹⁷ Centers for Medicare and Medicaid Services, “Health Care Fraud and Program Integrity: An Overview for Providers,” July 2016.

Competitive Contracting with Limited Pharmacy Networks: Medicaid programs in both the FFS and MCO settings tend to contract with all willing pharmacies. This is consistent with how many traditional Medicaid programs contract with physicians, hospitals, and all other provider types. However, it is not consistent with how PBMs and health plans conduct provider contracting in the commercial and Medicare arenas. Likewise, capitated Medicaid plans typically contract with a subset of area providers for most non-pharmacy services (channeling patient volume to their network providers), but typically have not yet utilized competitive network contracting approaches with pharmacies.

The specific potential savings estimates from limited pharmacy contracting in this report are based on a 2013 CMS study, “Part D Claims Analysis: Negotiated Pricing Between Preferred and Non-Preferred Pharmacy Networks.” This study encompassed more than 3 million prescription drug claims across 13 Medicare Part D plans during 2013. These 13 plans used a preferred network model and two-thirds of their overall prescriptions occurred at “preferred pharmacies.” The aggregate finding was that costs were 6.1% lower in the preferred network setting than for prescriptions filled at non-preferred pharmacies. Because there is little evidence regarding the savings of limited pharmacy networks in the Medicaid arena, we conservatively applied this savings percentage (6.1%) only to baseline Medicaid fee-for-service costs to estimate the impacts of optimally utilizing pharmacy network options. However, there could be significant savings opportunities for greater use of limited pharmacy networks to yield additional Medicaid savings on MCO-paid medications as well as those currently paid in the traditional Medicaid setting.