The Menges Group

Strategic Health Policy & Care Coordination Consulting

Medicaid Prescription Drug Benefit Management: Performance Comparison Across Different State Policy Approaches

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I. Executive Summary

This report quantifies the cost-effectiveness of alternative approaches to managing Medicaid's prescription drug benefit. Tabulations were made taking into account all Medicaid prescriptions and Medicaid rebates across the three-year timeframe FFY2018 – FFY2020 in each state. The states were rolled up into five groups based on the degree to which Medicaid managed care organizations (MCOs) were responsible for the pharmacy benefit and the degree to which the MCOs are given latitude to manage the pharmacy benefit.

Note that while this report focuses on cost-effectiveness, it is but one factor that states may consider when deciding how to manage the Medicaid prescription drug benefit. Clinical outcomes, quality, and provider and beneficiary experience are also important considerations, but they are outside of the scope of this study.

One key finding is that utilizing the MCOs to pay for prescription drugs is far more cost-effective than relying on the fee-for-service (FFS) setting.

- Net Medicaid costs per prescription across states that utilized MCOs extensively and allowed the MCOs to manage the benefit in their own preferred manner (within the boundaries of general regulatory oversight) were $37.87 across the three-year timeframe assessed.
- Corresponding costs across states using the FFS setting to pay for Medicaid prescriptions were $45.40 – 19.9% higher. States using the FFS setting may manage the benefit themselves or contract with a pharmacy benefit manager (PBM) to manage the benefit on behalf of the state.
- When we controlled for the fact that some states have not yet adopted Medicaid expansion, the FFS setting's costs per prescription were 22.8% above those in the states using MCOs and drawing on these health plans' full set of benefits management tools.

Another key finding is that allowing MCOs to manage the benefit in their preferred manner is more cost-effective than requiring that they use a uniform preferred drug list (PDL).

- We find that the MCO latitude policy approach has yielded net costs per prescription approximately 4.5% below the uniform PDL approach.

- This finding also shows that the uniform PDL approach (where MCOs are serving as the payer) is far outperforming the model of relying entirely on the FFS setting for Medicaid pharmacy benefits management.

Finally, an interesting dynamic shown in our tabulations is that the FFS setting is capturing much larger rebates than are occurring in the MCO setting, but the MCO setting is still achieving considerable net savings relative to FFS.

- MCOs are achieving much more favorable initial (pre rebate) costs per prescription due to their management of the mix of drugs – particularly a much higher reliance on use of generic medications.
- The larger rebates in the FFS setting close much of this initial gap, but considerable net MCO savings have still occurred.

The over-arching policy finding of this report is that it behooves states to take advantage of Medicaid MCOs' prescription drug cost management acumen, rather than utilize the FFS setting or implement uniform PDL requirements.

II. Introduction

Capitation contracting with Medicaid managed care organizations (MCOs) has become the nation's primary approach to organizing and delivering Medicaid coverage. During Federal Fiscal Year (FFY) 2020, 53% of nationwide Medicaid expenditures occurred via capitation payments, with fee-for-service (FFS) payments to providers representing 43% of expenditures and the remaining 7% comprised of special financing arrangements (e.g., disproportionate share and other supplemental payments to hospitals). Within the pharmacy benefit, more than 70% of nationwide Medicaid prescriptions have been paid by MCOs during the past several years. Note that while this report focuses on cost-effectiveness, it is but one factor that states may consider when deciding how to manage the Medicaid prescription drug benefit. Clinical outcomes, quality, and provider and beneficiary experience are also important considerations, but they are outside of the scope of this study.

The purpose of this report is to assess the cost-effectiveness of different state policy approaches to managing their Medicaid prescription drug benefit across several key cost metrics.

Currently, 12 states enlist MCOs to manage the drug benefit in the manner they view to be most appropriate/effective, monitoring the health plans' practices through their regulatory oversight process. 14 states have taken the policy approach of keeping MCOs at risk for the drug benefit, but with the states determining the contents of the preferred drug list (PDL) and requiring all MCOs to use this uniform PDL. Six of these 14 states employ a uniform PDL across all therapeutic class and some of these states implement a uniform PDL across selected therapeutic classes. Approximately 17 states pay for all (or nearly all) of Medicaid prescriptions through the fee-for-service setting, either due to not using the MCO capitation contracting model or "carving out" the drug benefit from the MCOs' responsibility, pay for all Medicaid prescriptions through the FFS setting. States using the FFS setting may manage the benefit themselves or contract with a pharmacy benefits management (PBM) entity to manage the benefit on behalf of the state. In addition, seven states (plus the District of Columbia) have between 25% and 75% of their Medicaid prescriptions paid in both the FFS and MCO settings.

The Anthem Public Policy Institute enlisted The Menges Group to compare the cost-effectiveness of these different approaches. The remaining sections of this report convey the data sources and methodology used to conduct these comparisons, present our analytical findings, and summarize what we view to be the key policy implications of these analyses and findings.

III. Data Sources and Methodology

A. Data Sources

Our organization works extensively with a 100% sample of Medicaid's pharmacy data. The Centers for Medicare and Medicaid Services (CMS) makes National Drug Code (NDC) level data available for each state and calendar quarter, showing prescription volume and amounts paid to pharmacies.[1] The amounts paid in this data set, while comprehensive, are pre-rebate, and large rebates (averaging approximately 50% of pre-rebate payments) occur in the Medicaid arena. These aggregate rebates are available on a statewide level in a separate CMS data file, the Financial Management Reports (FMRs).[2] Working with these two data sets, we are able to derive net Medicaid pharmacy costs in each state and fiscal year as well as the percentage of prescriptions paid by Medicaid managed care organizations (MCOs). A state's net costs per prescription are an important indicator as to how effectively the Medicaid prescription drug benefit is being managed.

We have also created a crosswalk that designates each NDC as a brand or generic drug, with a very small share (less than 1%) of medications currently uncategorized and included in this analysis as brands. With this information, we can assess the percentage mix of prescriptions and costs between brand and generic drugs. Generic prescriptions require a 13% rebate per the provisions of the Affordable Care Act (ACA). Applying the 13% rebate to the pre-rebate amounts paid for generic drugs, we can derive the average rebates paid in each state for brand drugs.

Using a variety of additional data sources, including data published on state Medicaid websites, information published on the Kaiser Family Foundation's website, and our direct knowledge of Medicaid managed care programs through our consulting work, we have categorized each state's policy approach regarding how the prescription drug benefit is managed. While all states have at least some Medicaid prescriptions paid in the fee-for-service (FFS) setting, most Medicaid prescriptions nationwide – 72.6% in FFY2020 – are paid by MCOs. States vary in the degree to which MCOs are permitted to use their own pharmacy benefit tools, versus adhere to state-mandated uniform approaches.

[1] This data source is the State Drug Utilization Files, available at: https://www.medicaid.gov/medicaid/prescription-drugs/state-drug-utilization-data/index.html
[2] The FMR data are available at: https://www.medicaid.gov/medicaid/financial-management/state-expenditure-reporting-for-medicaid-chip/expenditure-reports-mbescbes/index.html

B. Analytic Approach

As shown in *Exhibit A*, we have divided all 50 states (and the District of Columbia) into five groups based on the degree to which the MCOs pay for Medicaid prescriptions and the states' policies regarding the MCO-permitted benefits management approaches.

Exhibit A. Construct for State Groups

State Group Name	Medicaid Pharmacy Benefits Characteristics of This Group	States in This Group
Group A, MCO Latitude (12 states)	MCOs have wide latitude to manage the pharmacy benefit.	Hawaii, Illinois, Indiana, Kentucky, New Hampshire, New Jersey, New Mexico, New York, Ohio, Oregon, Pennsylvania, Rhode Island
Group B Uniform PDL (8 states)	Medicaid MCOs must all use the same preferred drug list (PDL) as established by the State Medicaid agency.	Arkansas, Delaware, Iowa, Kansas, Louisiana, Minnesota, Mississippi, Texas
Group C Uniform PDL, Some Classes (6 states)	These states are like those in Group B, except that the Uniform PDL approach is required only for a few selected drug classes.	Arizona, Florida, Nebraska, South Carolina, Virginia, Washington
Group D All (or most) Prescriptions Paid via FFS (17 states)	Medicaid prescriptions are paid entirely (or overwhelmingly) in the FFS setting due to absence of an MCO contracting program, or due to the prescription drug benefit being largely or entirely "carved out" of the MCOs' capitated benefits package.	Alabama, Alaska, Colorado, Connecticut, Idaho, Maine, Missouri, Montana, North Carolina, North Dakota, Oklahoma, South Dakota, Tennessee, Vermont, West Virginia, Wisconsin, Wyoming
Group E Blended Model (7 states + DC)	A blend of the above approaches is used, such that the state does not fit neatly into any one of the above categories. Appendix C describes the dynamics of each state in this category.	California, District of Columbia, Georgia, Maryland, Massachusetts, Michigan, Nevada, Utah

These state groups all have sizable Medicaid prescription volume to support a valid comparison. The number of prescriptions, along with each group's share of nationwide Medicaid prescriptions, is shown in *Exhibit B*. The *smallest* state group, Group C, paid over 80 million Medicaid prescriptions each year from FFY2018 through FFY2020.

Exhibit B. Medicaid Prescription Volume in Each State Group

State Group	Total Medicaid Prescriptions				Share of Nationwide Medicaid Prescriptions			
	FFY2018	FFY2019	FFY2020	3 Year Total	FFY2018	FFY2019	FFY2020	3 Year Total
Group A: MCO Latitude	268,827,348	264,999,738	255,808,512	789,635,598	36.0%	36.4%	35.8%	36.1%
Group B: Uniform PDL	92,536,284	89,795,087	84,993,866	267,325,236	12.4%	12.3%	11.9%	12.2%
Group C: Uniform PDL Some Classes	83,349,980	82,043,682	88,322,495	253,716,157	11.2%	11.3%	12.4%	11.6%
Group D: All (or Most) Prescriptions Paid via FFS	107,795,051	106,024,489	104,595,642	318,415,182	14.4%	14.6%	14.6%	14.5%
Group E: Blended Model	194,453,976	185,699,845	180,699,951	560,853,772	26.0%	25.5%	25.3%	25.6%
Total	**746,962,639**	**728,562,840**	**714,420,467**	**2,189,945,946**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

The data allow us to differentiate MCO-paid prescriptions and FFS-paid prescriptions in each state (and thus in each state grouping). Such analyses consistently demonstrate significantly lower costs per prescription among MCO-paid prescriptions. However, we view it to be appropriate, if not essential, to focus on statewide Medicaid pharmacy costs in our tabulations. This approach controls for the fact that states include different Medicaid subgroups in their capitation programs and often leave higher-cost subgroups in the FFS coverage environment.

Aside from Group D, which includes the 17 states where Medicaid prescriptions are paid entirely (or overwhelmingly) in the FFS setting, MCOs are paying for a considerable majority of all Medicaid prescriptions in each of the other groups. In *Exhibit C*, we convey the share of Medicaid prescriptions paid by MCOs in each state group. Across Groups A, B, C, and E, MCOs paid for 84% of Medicaid prescriptions during the three-year period from FFY2018 to FFY2020.

Exhibit C. Share of Medicaid Prescriptions Paid by MCOs in Each State Group

State Group	MCO % of Prescriptions			
	FFY2018	FFY2019	FFY2020	3 Year Average
Group A: MCO Latitude	89.7%	89.8%	90.8%	90.1%
Group B: Uniform PDL	88.4%	89.0%	89.5%	88.9%
Group C: Uniform PDL Some Classes	92.7%	94.0%	95.6%	94.1%
Group D: All (or Most) Prescriptions Paid via FFS	1.6%	1.4%	2.2%	1.7%
Group E: Blended Model	68.7%	68.1%	68.4%	68.4%
Total	**71.7%**	**71.8%**	**72.6%**	**72.0%**

Based on our previous findings that adopting Medicaid expansion has, on average, led to an approximate 5% increase in statewide Medicaid costs per prescription, we adjusted each Medicaid expansion state's pharmacy costs downward by 5.0%. This adjustment further equalizes the Medicaid populations in each state and state grouping. The adult population accessing Medicaid coverage via the expansion program have relatively higher use of many high-cost drugs (e.g., HIV medications, curative Hepatitis C drugs, etc.).

IV. Cost-Effectiveness Comparisons of Different State Models

A. Cost Analyses

The focal point of our tabulations is to derive the net cost per Medicaid prescription in each state group for FFY2018, FFY2019, and FFY2020. *Exhibit D* conveys our tabulations of total pre-rebate costs in each state group and fiscal year, along with the total rebates manufacturers paid back to states, MCOs, and their pharmacy benefits management (PBM) contractors. The rebate figures are primarily comprised of statutory rebates – the amounts manufacturers pay to states based on the provisions of the Affordable Care Act (ACA). These rebates also include supplemental rebates – the additional amounts that states, MCOs, and PBMs negotiated with manufacturers for brand drugs.

Exhibit D. Medicaid Prescription Drug Costs: Initial Payments and Rebate Levels

	Total Paid Amount (pre-rebate)			Total Rebates		
State Group	**FFY2018**	**FFY2019**	**FFY2020**	**FFY2018**	**FFY2019**	**FFY2020**
Group A: MCO Latitude	$21,342,450,629	$21,473,204,102	$22,321,216,608	$11,523,412,680	$11,693,018,138	$12,020,205,894
Group B: Uniform PDL	$7,881,116,079	$8,021,430,756	$8,297,046,979	$4,541,887,112	$4,576,165,262	$4,747,069,647
Group C: Uniform PDL Some Classes	$7,164,164,349	$7,676,478,781	$8,868,316,450	$4,123,621,169	$4,474,900,982	$5,313,521,043
Group D: All (or Most) Prescriptions Paid via FFS	$11,366,881,967	$11,800,649,426	$12,515,270,883	$6,485,028,698	$6,855,227,248	$7,887,503,677
Group E: Blended Model	$16,111,809,238	$15,897,955,863	$16,217,192,051	$8,595,661,005	$8,530,732,618	$9,035,198,500
Total	**$63,866,422,262**	**$64,869,718,929**	**$68,219,042,970**	**$35,269,610,665**	**$36,130,044,247**	**$39,003,498,762**

Medicaid pre-rebate pharmacy expenditures totaled $68.2 billion nationwide during FFY2020, with the rebates totaling $39.0 billion. As such, 57.2% of initial Medicaid pharmacy costs were eliminated by manufacturer rebates. This percentage has been increasing each year – prescription drug rebates accounted for 55.2% of initial pharmacy expenditures in FFY2018 and 55.7% in FFY2019.

Exhibit E presents net Medicaid pharmacy costs in two ways. The first set of figures shows the actual net costs that subtract the rebate amounts from the pre-rebate costs in Exhibit D. The figures in the right-hand columns show the net costs after we reduced each Medicaid expansion state's costs by 5.0% to equalize the Medicaid population differences that could distort comparisons of the cost-effectiveness of Medicaid pharmacy benefits management across state groups. Each of the five state groups contain at least one Medicaid expansion state. Thus, this adjustment affected all the net cost figures shown in Exhibit E.

Exhibit E. Net (Post-Rebate) Medicaid Prescription Drug Costs

State Group	Net Cost			Net Cost, Adjusted for Medicaid Expansion		
	FFY2018	FFY2019	FFY2020	FFY2018	FFY2019	FFY2020
Group A: MCO Latitude	$9,819,037,949	$9,780,185,964	$10,301,010,713	$9,328,086,052	$9,291,176,666	$9,785,960,178
Group B: Uniform PDL	$3,339,228,966	$3,445,265,494	$3,549,977,332	$3,260,748,078	$3,360,982,559	$3,454,704,659
Group C: Uniform PDL Some Classes	$3,040,543,180	$3,201,577,799	$3,554,795,406	$2,960,861,876	$3,109,811,750	$3,446,200,251
Group D: All (or Most) Prescriptions Paid via FFS	$4,881,853,268	$4,945,422,179	$4,627,767,206	$4,749,636,389	$4,813,605,640	$4,504,598,125
Group E: Blended Model	$7,516,148,233	$7,367,223,245	$7,181,993,551	$7,174,675,019	$7,033,524,815	$6,852,655,833
Total	**$28,596,811,597**	**$28,739,674,681**	**$29,215,544,209**	**$27,474,007,415**	**$27,609,101,431**	**$28,044,119,046**

Exhibits F through I translate the above information into costs per prescription. *Exhibit F* conveys pre-rebate costs per prescription for each state group and year. These figures begin to convey the stark differences between some of the approaches to Medicaid pharmacy benefits management. The average pre-rebate cost per prescription in Group A – the set of states providing MCOs with wide latitude to use their cost containment tools (and where approximately 90 percent of all Medicaid prescriptions are paid by the MCOs) – is roughly $30 (and more than 30 percentage points) lower than in Group D – where approximately 98% of Medicaid prescriptions are paid in the FFS setting. Pre-rebate costs per prescription in Groups B, C, and E have consistently been relatively close to the overall US average – above the costs occurring in Group A but well below the costs occurring in Group D.

In assessing the trends from 2018 to 2020, two important observations emerge:

1. Medicaid pharmacy costs have trended up sharply on a per prescription basis during this timeframe, increasing nationwide by 11.7% from FFY2018 to FY2020.
2. The cost per prescription differential between Group A and Group D widened from $26.06 in FFY2018 to $32.40 in FFY2020. The MCOs' acumen in managing "front-end" Medicaid prescription drug costs appears to have been of increasing value in recent years.

Exhibit F. Initial (Pre-Rebate) Medicaid Costs Per Prescription by Year and State Group

State Group	Cost per Prescription, Pre-Rebate				
	FFY2018	FFY2019	FFY2020	3 Year Total	State Group as % of Nationwide Figure
Group A: MCO Latitude	$79.39	$81.03	$87.26	$82.49	91.7%
Group B: Uniform PDL	$85.17	$89.33	$97.62	$90.52	100.7%
Group C: Uniform PDL Some Classes	$85.95	$93.57	$100.41	$93.45	103.9%
Group D: All (or Most) Prescriptions Paid via FFS	$105.45	$111.30	$119.65	$112.06	124.6%
Group E: Blended Model	$82.86	$85.61	$89.75	$85.99	95.6%
Total	**$85.50**	**$89.04**	**$95.49**	**$89.94**	**100.0%**

Given that Medicaid rebates represent (and offset) more than half of pre-rebate pharmacy costs, it is critical to consider these rebates when comparing the overall benefits management cost-effectiveness of each state grouping. Medicaid rebates per prescription are presented in *Exhibit G*. These tabulations appear to tell the opposite story of the pre-rebate data in *Exhibit F*. The Group D states, paying predominantly for Medicaid prescriptions in the FFS setting, are securing far larger rebates per prescription than those of all other state groups. Conversely, Group A states, where the lowest pre-rebate costs occurred, collectively received the smallest Medicaid rebates per prescription throughout the FFY2018-FFY2020 timeframe. As will be shown in subsequent analyses in this report, these lower rebates are due predominantly to the relatively extensive use of generics occurring in the Group A states. Rebates in Groups B, C, and E were relatively close to the national average.

Rebates per Medicaid prescription increased by 15.6% during FFY2020, relative to FFY2018. This sharp increase in rebates ameliorates much of the pre-rebate cost increases we identified in Exhibit F. Nationwide, average pre-rebate costs per prescription increased by $9.99 from FFY2018 to FFY2020, with rebates per prescription increasing by $7.38 during this timeframe.

Exhibit G. Medicaid Rebates Per Prescription by Year and State Group

	Rebate per Prescription				
State Group	**FFY2018**	**FFY2019**	**FFY2020**	**3 Year Total**	**State Group as % of Nationwide Figure**
Group A: MCO Latitude	$42.87	$44.12	$46.99	$44.62	88.5%
Group B: Uniform PDL	$49.08	$50.96	$55.85	$51.87	102.9%
Group C: Uniform PDL Some Classes	$49.47	$54.54	$60.16	$54.83	108.8%
Group D: All (or Most) Prescriptions Paid via FFS	$60.16	$64.66	$75.41	$66.67	132.2%
Group E: Blended Model	$44.20	$45.94	$50.00	$46.65	92.5%
Total	**$47.22**	**$49.59**	**$54.49**	**$50.41**	**100.0%**

We convey the net Medicaid cost per prescription for each state group and fiscal year in *Exhibit H*. Importantly, these figures demonstrate that the MCOs' acumen at optimally managing pre-rebate costs is more valuable than the FFS setting's acumen at securing relatively large rebates per prescription. Net costs per prescription in Group A are the lowest of any state grouping, and net costs in Group D are the highest. Across the three-year timeframe, the net costs in Group A (where Medicaid MCOs have the widest latitude to manage the pharmacy benefit as they deem most appropriate) were $7.53 – or 19.9% - below those in Group D (the states paying for Medicaid prescriptions in the FFS setting).

Exhibit H. Net (Post-Rebate) Medicaid Costs Per Prescription by Year and State Group

State Group	Net Cost per Prescription				
	FFY2018	FFY2019	FFY2020	3 Year Total	State Group as % of Nationwide Figure
Group A: MCO Latitude	$36.53	$36.91	$40.27	$37.87	95.8%
Group B: Uniform PDL	$36.09	$38.37	$41.77	$38.66	97.8%
Group C: Uniform PDL Some Classes	$36.48	$39.02	$40.25	$38.61	97.7%
Group D: All (or Most) Prescriptions Paid via FFS	$45.29	$46.64	$44.24	$45.40	114.9%
Group E: Blended Model	$38.65	$39.67	$39.75	$39.34	99.5%
Total	**$38.28**	**$39.45**	**$40.89**	**$39.52**	**100.0%**

The MCO latitude model (Group A) has also outperformed the uniform PDL model (shown in Groups B and C) in terms of favorable net costs per prescription, although by a much lesser margin relative to the FFS setting. Net costs per prescription were 2.1% below Group B and 1.9% below Group C across the three-year timeframe. In all three of these groups (A, B, and C), Medicaid MCOs paid for most of these states' Medicaid prescriptions. A key takeaway from these data findings is that, while affording MCOs latitude to utilize their cost management tools is optimal, it is particularly valuable to put the MCOs at risk for pharmacy costs under any model (rather than carve-out the drug benefit to the FFS setting).

These dynamics became more pronounced when we equalize state populations based on their approaches to adopting Medicaid expansion. These tabulations are conveyed in *Exhibit I*. After adjusting net costs per prescription to account for Medicaid expansion, we find that Group D costs across the three-year timeframe were 22.8% above those in Group A, and Groups B and C had net costs that were 4.8% and 4.3% above Group A's, respectively.

Exhibit I. Net Medicaid Costs Per Prescription, Normalized for Medicaid Expansion Impacts

State Group	Net Cost per Prescription, Adjusted for Medicaid Expansion				
	FFY2018	FFY2019	FFY2020	3 Year Total	State Group as % of Nationwide Figure
Group A: MCO Latitude	$34.70	$35.06	$38.26	$35.97	94.8%
Group B: Uniform PDL	$35.24	$37.43	$40.65	$37.69	99.3%
Group C: Uniform PDL Some Classes	$35.52	$37.90	$39.02	$37.51	98.8%
Group D: All (or Most) Prescriptions Paid via FFS	$44.06	$45.40	$43.07	$44.18	116.4%
Group E: Blended Model	$36.90	$37.88	$37.92	$37.55	98.9%
Total	**$36.78**	**$37.90**	**$39.25**	**$37.96**	**100.0%**

B. Generic Prescription Drug Use

Generic prescription drug usage rates also serve as a valuable metric to assess the effectiveness of states' Medicaid prescription drug management efforts. Nationwide during FFY2020, the average net costs of Medicaid brand prescriptions were approximately *12 times higher* than the average net cost of generic prescriptions. *Exhibit* J presents the generic percentage of total Medicaid prescriptions in each state group.

Exhibit J. Generic Percentage of Medicaid Prescriptions

	Generic % of Prescriptions			
State Group	**FFY2018**	**FFY2019**	**FFY2020**	**3 Year Total**
Group A: MCO Latitude	88.4%	89.2%	90.5%	89.3%
Group B: Uniform PDL	86.6%	87.6%	87.9%	87.4%
Group C: Uniform PDL Some Classes	87.1%	86.5%	86.6%	86.7%
Group D: All (or Most) Prescriptions Paid via FFS	83.2%	82.9%	83.9%	83.3%
Group E: Blended Model	87.4%	88.4%	89.5%	88.4%
Total	**87.0%**	**87.6%**	**88.5%**	**87.7%**

The generic usage tabulations by state group follow the same pattern as the net cost information presented previously. Across states where MCOs are predominantly responsible for the drug benefit and have extensive latitude to manage the mix of drugs (Group A), generics now represent more than 90% of all Medicaid prescriptions. Where MCOs are not paying for Medicaid prescriptions (Group D), generics have represented approximately 83% of all prescriptions in recent years.

The average six percentage point generic prescribing differential between Groups A and D may appear modest over the past three years. However, it creates large-scale dollar savings in the MCO setting relative to FFS. MCOs' steerage of volume towards generics is a driving factor behind Group A's pre-rebate costs per prescription being $29.57 below Group D across the three-year period assessed. The large rebates that the FFS setting (Group D) has secured on brand drugs capture back much of this deficit, but the net costs are still considerably lower in Group A.

Similar dynamics exist between Group A and Groups B and C (where a uniform PDL is used), although generic prescribing under a uniform PDL approach has been "only" two to three percentage points below that of Group A. Due to the vast differences in costs between brand and generic drugs, these

minor percentage point differences are key contributors to the MCO latitude model outperforming the uniform PDL model in terms of net costs.

C. State-Specific Medicaid Prescription Drug Data

The state level tabulations that have been "rolled up" into the five broad groups of states in this report are presented in Appendices A and B. Each of these tables also conveys which of the five groups the state has been assigned to. These exhibits are as follows:

- Appendix A: FFY2020 Medicaid prescription volume, including MCO percentage of prescription volume paid by MCOs and generic percentage of prescriptions
- Appendix B: FFY2020 costs per prescription – pre-rebate, rebates, and net costs

V. Policy Implications of Our Key Findings

There are two central approaches to managing Medicaid pharmacy costs. The Medicaid MCOs and their PBMs work most aggressively to steer prescription volume to the least expensive drugs in terms of their pre-rebate costs, as depicted in Group A. In the FFS setting, depicted in Group D, the states focus more intensively on steering product to brand medications where they can negotiate the largest manufacturer rebates. The uniform PDL approaches in Groups B and C represent somewhat of a hybrid, where the health plans are at full risk for the cost of the medications, but where states are negotiating rebate "deals" with brand drug manufacturers and steering volume towards those drugs.

The tabulations in *Exhibit F* through *Exhibit J* present the outcomes of these alternative Medicaid pharmacy benefits management approaches. **The findings compellingly demonstrate that the MCO latitude model yields the most cost-effective pharmacy benefits management outcomes.** The most important comparisons are between Group A (where MCOs pay for 90% of Medicaid prescriptions and have wide latitude exists) and Group D (where prescriptions are paid for in the FFS setting). We summarize these stark differences using FFY2018 to FFY2020 averages in *Exhibit K*.

More modest differences were apparent in comparing the MCO Latitude states (Group A) with the Uniform PDL states (Groups B and C). **However, these comparisons, which use a rather massive amount of data across a three-year timeframe, also consistently demonstrate that a policy of providing MCO latitude to manage the mix of drugs is more cost-effective than implementing a statewide uniform PDL approach.** It is also important to note that, while the net cost advantage in the Group A states was less than $2 per prescription relative to the uniform PDL model, this differential translates to substantial savings when applied to a state's total prescription volume. These savings continue to accrue over time. During FFY2020, Medicaid prescription volume averaged approximately 14 million per state; thus, **each dollar of net cost per prescription savings will yield $14 million in Medicaid savings per year in an "average state."**

Exhibit K. Medicaid Pharmacy Benefits Management Outcomes Across FFY2018 – FFY2020

Statistical Measure	MCO Latitude Approach (Group A States)	Uniform PDL Approach (Group B States)	Uniform PDL Approach, Some Drug Classes (Group C States)	FFS Management Group D States	FFS Setting's % Above MCO Latitude Setting (Group D vs. Group A)
Initial Costs Per Prescription (pre-rebate)	$82.49	$90.52	$93.45	$112.06	35.9%
Rebates Per Prescription	$44.62	$51.87	$54.83	$66.67	49.4%
Net Costs Per Prescription	$37.87	$38.66	$38.61	$45.40	19.9%
Net Costs Per Prescription, Adjusted for Medicaid Expansion	$35.97	$37.69	$37.51	$44.18	22.8%
Generics as % of All Medicaid Prescriptions	89.3%	87.4%	86.7%	83.3%	-6.7%

The over-arching policy finding of this report is that it behooves states to take advantage of Medicaid MCOs' prescription drug cost management acumen, rather than utilize the FFS setting or implement uniform PDL requirements.

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APPENDIX A:

STATE MEDICAID PHARMACY POLICY, PRESCRIPTION VOLUME, MCO SHARE OF PRESCRIPTIONS, AND GENERIC SHARE OF PRESCRIPTIONS, FFY2020

State	Medicaid Managed Care Pharmacy Policy	Year Current Medicaid Pharmacy Policy Was Implemented	Total Medicaid Perscriptions, FFY 2020	Percentage of Prescriptions Paid by MCOs, FFY 2020	Generic % of Medicaid Prescriptions, FFY 2020
Alabama	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	1965	7,086,445	0.0%	84.5%
Alaska	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	1965	1,418,185	0.0%	86.5%
Arizona	Group C: Uniform PDL Some Classes	2018*	15,911,725	99.3%	88.0%
Arkansas	Group B: Uniform PDL	2018*	5,239,844	17.2%	86.2%
California	Group E: Blended Model	1972	91,482,724	74.5%	89.8%
Colorado	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	2015*	7,520,792	6.1%	85.0%
Connecticut	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	2012	9,234,722	0.0%	80.7%
Delaware	Group B: Uniform PDL	2015*	2,898,697	99.5%	86.8%
District of Columbia	Group E: Blended Model	1994	2,121,340	58.5%	87.3%
Florida	Group C: Uniform PDL Some Classes	2014	26,465,224	95.2%	85.4%
Georgia	Group E: Blended Model	2006	15,672,594	54.1%	90.1%
Hawaii	Group A: MCO Latitude	1994	2,387,392	99.9%	91.3%
Idaho	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	1965	3,122,205	0.0%	86.3%
Illinois	Group A: MCO Latitude	2013	25,526,670	92.1%	91.1%
Indiana	Group A: MCO Latitude	2013	16,560,137	82.9%	89.1%
Iowa	Group B: Uniform PDL	2015	5,300,924	98.6%	85.2%
Kansas	Group B: Uniform PDL	2018*	3,342,523	99.7%	89.0%
Kentucky	Group A: MCO Latitude	1997	23,030,532	93.8%	93.0%
Louisiana	Group B: Uniform PDL	2019	19,550,434	96.4%	90.8%
Maine	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	1965	2,545,083	0.0%	74.2%
Maryland	Group E: Blended Model	1997	13,982,917	66.9%	88.7%
Massachusetts	Group E: Blended Model	1975	17,275,525	49.7%	86.1%
Michigan	Group E: Blended Model	2019	29,906,586	70.0%	90.5%
Minnesota	Group B: Uniform PDL	2019	12,889,539	83.6%	87.9%
Mississippi	Group B: Uniform PDL	2015	5,243,050	83.8%	90.2%
Missouri	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	1965	11,298,339	0.0%	85.4%
Montana	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	1965	3,183,727	0.0%	85.6%
Nebraska	Group C: Uniform PDL Some Classes	2018*	2,773,858	100.0%	86.7%
Nevada	Group E: Blended Model	1998	7,317,773	72.0%	90.3%
New Hampshire	Group A: MCO Latitude	2014	2,262,397	99.4%	88.9%
New Jersey	Group A: MCO Latitude	1995	19,705,267	98.4%	92.4%
New Mexico	Group A: MCO Latitude	1997	4,832,178	94.4%	88.0%
New York	Group A: MCO Latitude	2013	71,539,496	85.9%	90.0%
North Carolina	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	1965	15,275,795	0.0%	80.1%
North Dakota	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	1965	1,030,526	16.0%	86.1%
Ohio	Group A: MCO Latitude	1975	43,485,947	91.8%	89.1%
Oklahoma	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	1965	5,324,447	0.0%	86.9%
Oregon	Group A: MCO Latitude	1994	10,044,367	78.2%	91.5%
Pennsylvania	Group A: MCO Latitude	1972	33,069,907	97.8%	90.6%
Rhode Island	Group A: MCO Latitude	1994	3,364,221	96.2%	92.9%
South Carolina	Group C: Uniform PDL Some Classes	2006	6,938,707	85.3%	89.6%
South Dakota	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	1965	867,654	0.0%	86.3%
Tennessee	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	1965**	13,923,138	10.4%	87.8%
Texas	Group B: Uniform PDL	2012	30,528,855	97.3%	86.3%
Utah	Group E: Blended Model	1982	2,940,492	55.6%	86.9%
Vermont	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	1965	1,529,740	0.8%	76.7%
Virginia	Group C: Uniform PDL Some Classes	2018	21,209,683	98.2%	84.0%
Washington	Group C: Uniform PDL Some Classes	2018	15,023,298	92.5%	89.5%
West Virginia	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	2018	9,222,813	2.3%	84.8%
Wisconsin	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	2011*	11,607,321	0.1%	83.1%
Wyoming	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	1965	404,709	0.0%	85.8%
USA			**714,420,467**	**72.6%**	**88.5%**

Single asterisk indicates that policy approach has been in place since at least the year shown (although implementation year could have been earlier). Double asterisk for Tennessee indicates that state moved to a single PBM model effective 1/1/2020 (although carve-out model is still in place).

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APPENDIX B:

FFY2020 MEDICAID PER PRESCRIPTION COSTS BY STATE -- PRE-REBATE, REBATES, AND NET (POST-REBATE)

State	Medicaid Managed Care Pharmacy Policy	Initial (Pre-Rebate) Costs per Prescription, FFY 2020	Rebates per Prescription, FFY 2020	Net (Post-Rebate) Costs per Prescription, FFY 2020
Alabama	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	$120.11	$72.57	$47.54
Alaska	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	$126.16	$74.22	$51.94
Arizona	Group C: Uniform PDL Some Classes	$97.26	$60.41	$36.84
Arkansas	Group B: Uniform PDL	$81.64	$45.32	$36.32
California	Group E: Blended Model	$91.22	$50.92	$40.30
Colorado	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	$147.29	$99.13	$48.16
Connecticut	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	$154.71	$103.20	$51.51
Delaware	Group B: Uniform PDL	$88.64	$46.54	$42.10
District of Columbia	Group E: Blended Model	$103.23	$56.78	$46.45
Florida	Group C: Uniform PDL Some Classes	$116.94	$75.73	$41.21
Georgia	Group E: Blended Model	$81.10	$43.12	$37.98
Hawaii	Group A: MCO Latitude	$91.07	$47.93	$43.14
Idaho	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	$105.73	$51.78	$53.95
Illinois	Group A: MCO Latitude	$94.35	$49.53	$44.81
Indiana	Group A: MCO Latitude	$117.42	$63.38	$54.05
Iowa	Group B: Uniform PDL	$78.00	$42.90	$35.10
Kansas	Group B: Uniform PDL	$101.43	$59.67	$41.76
Kentucky	Group A: MCO Latitude	$62.38	$30.64	$31.73
Louisiana	Group B: Uniform PDL	$94.33	$48.81	$45.52
Maine	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	$143.84	$89.13	$54.71
Maryland	Group E: Blended Model	$94.85	$52.16	$42.68
Massachusetts	Group E: Blended Model	$100.26	$49.87	$50.40
Michigan	Group E: Blended Model	$77.63	$48.31	$29.32
Minnesota	Group B: Uniform PDL	$89.16	$49.04	$40.12
Mississippi	Group B: Uniform PDL	$96.21	$50.51	$45.70
Missouri	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	$111.90	$69.78	$42.12
Montana	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	$106.30	$65.65	$40.65
Nebraska	Group C: Uniform PDL Some Classes	$81.72	$50.78	$30.93
Nevada	Group E: Blended Model	$86.71	$45.58	$41.13
New Hampshire	Group A: MCO Latitude	$98.77	$51.85	$46.92
New Jersey	Group A: MCO Latitude	$73.13	$41.75	$31.39
New Mexico	Group A: MCO Latitude	$85.94	$53.05	$32.89
New York	Group A: MCO Latitude	$87.54	$48.81	$38.73
North Carolina	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	$136.12	$85.42	$50.71
North Dakota	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	$85.82	$54.49	$31.34
Ohio	Group A: MCO Latitude	$82.16	$42.10	$40.07
Oklahoma	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	$110.01	$67.75	$42.26
Oregon	Group A: MCO Latitude	$77.66	$40.77	$36.89
Pennsylvania	Group A: MCO Latitude	$101.29	$55.08	$46.21
Rhode Island	Group A: MCO Latitude	$80.15	$40.60	$39.55
South Carolina	Group C: Uniform PDL Some Classes	$90.48	$48.35	$42.13
South Dakota	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	$135.96	$81.57	$54.38
Tennessee	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	$92.40	$59.01	$33.38
Texas	Group B: Uniform PDL	$110.13	$68.68	$41.45
Utah	Group E: Blended Model	$125.15	$71.96	$53.19
Vermont	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	$115.64	$69.39	$46.26
Virginia	Group C: Uniform PDL Some Classes	$95.77	$55.07	$40.70
Washington	Group C: Uniform PDL Some Classes	$89.21	$46.83	$42.37
West Virginia	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	$84.21	$50.53	$33.68
Wisconsin	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	$128.90	$83.75	$45.15
Wyoming	Group D: No MCO/Full or Major Pharmacy Carve-Out Program	$103.79	$62.27	$41.52
USA		**$95.49**	**$54.59**	**$40.89**

APPENDIX C:

STATES EXTENSIVELY USING MUTLIPLE MODELS Of PHARMACY BENEFITS MANAGEMENT ("Group E" States)

Most states predominantly pay for Medicaid prescriptions through either the FFS setting or the MCO setting. The states below use a significant blend of both FFS-paid and MCO-paid Medicaid prescriptions, which we have defined as a mixture between 25% and 75% of prescriptions being paid in each setting.

California: Across FFY2018 – FFY2020, 74% of Medi-Cal prescriptions were paid in the MCO setting, with 26% paid in the FFS setting. The FFS prescriptions represent a mixture of all medications for persons who are not enrolled in MCOs, and prescriptions in certain high-cost therapeutic classes (e.g., Hepatitis C and HIV/AIDS).

District of Columbia: Across FFY2018 – FFY2020, 58% of the District's Medicaid prescriptions were paid in the MCO setting, with 42% paid in the FFS setting.

Georgia: Across FFY2018 – FFY2020, 55% of Georgia's Medicaid prescriptions were paid in the MCO setting, with 45% paid in the FFS setting.

Maryland: Across FFY2018 – FFY2020, 68% of Maryland's Medicaid prescriptions were paid in the MCO setting, with 32% paid in the FFS setting.

Massachusetts: Across FFY2018 – FFY2020, Medicaid prescription volume was split equally (50%/50%) between the FFS and MCO settings.

Michigan: Across FFY2018 – FFY2020, 69% of Michigan Medicaid prescriptions were paid in the MCO setting, with 31% paid in the FFS setting.

Nevada: Across FFY2018 – FFY2020, 71% of Nevada's Medicaid prescriptions were paid in the MCO setting, with 29% paid in the FFS setting.

Utah: Across FFY2018 – FFY2020, 54% of Utah's Medicaid prescriptions were paid in the MCO setting, with 46% paid in the FFS setting.