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The Value of Integrated Pharmacy Benefits in Medicaid Managed Care

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Table of Contents

Executive Summary

As of 2017, more than two thirds of Medicaid beneficiaries receive care through risk-based managed care organizations (MCOs).[1] The majority of these beneficiaries receive their pharmacy benefits through an integrated (or carve-in) structure, where their MCO, as opposed to the state, manages both medical and pharmacy services. This method of benefit administration has resulted in seamless integration of medical and pharmacy services for members while implementing controls in pharmacy trends, and predictability in pharmacy costs for the state. Additionally, there is a substantial body of evidence that greater healthcare integration leads to lower costs, higher quality, and better health outcomes for individuals.

The analysis outlined in this report concludes that integrated pharmacy models are more cost effective than carved-out models, with estimated state cost savings averaging 30% and ranging between 15% and 53% in the six states reviewed in this analysis. Without the cost savings of an integrated pharmacy model, these states would need to significantly increase their state funding to switch to a carved-out model.[2] Such cost savings may provide much needed fiscal assistance for states seeking to maintain budget stability in the midst of various economic environments and associated changes in Medicaid enrollment.

In addition, with integrated pharmacy benefits, interventions targeted at providers significantly improved medication adherence among beneficiaries.[3] Integration can also lead to reduced hospital admissions and re-admissions, improved adherence to treatment guidelines, and better quality of life.[4] Improved health outcomes and costs savings are achievable by combining real time information, a single point of contact, and quality platforms that can identify care gaps, which are all components of an integrated model.

Overview

In recent years, some state pharmacy associations and other stakeholders have questioned whether Medicaid pharmacy benefits might be better administered by states through a carved-out model, where the state directly administers the pharmacy benefit while the remaining medical services continue to be administered by MCOs. Support for carving-out pharmacy has been largely driven by criticism over spread pricing and pharmacy steering practices by pharmacy benefit

[1] https://www.kff.org/other/state-indicator/total-medicaid-mco-enrollment/

[2] The Figure 1 results indicate that the State share of pharmacy costs under a carved out model are between 18% and 114% higher than an integrated model (e.g., for New York, 18% = 1 / [1 – 15%] and for Michigan, 114% = 1 / [1 – 53%]).

[3] Conn, T.M. et al. (2015). Healthcare provider targeted interventions to improve medication adherence: systematic review and meta-analysis. *Int J Clin Pract.* John Wiley & Sons Ltd. 69, 8, 889–899. doi: 10.1111/ijcp.12632.

[4] Martinez-Gonzalez, N. A. et al. (2014). Integrated care programmes for adults with chronic conditions: a meta-review. International Journal for Quality in Health Care. Volume 26, Number 5. pp. 561–570. Retrieved from http://creativecommons.org/licenses/by-nc-nd/4.0/.

managers (PBMs) and the hope that states may be able to save money through securing higher pharmacy rebates.

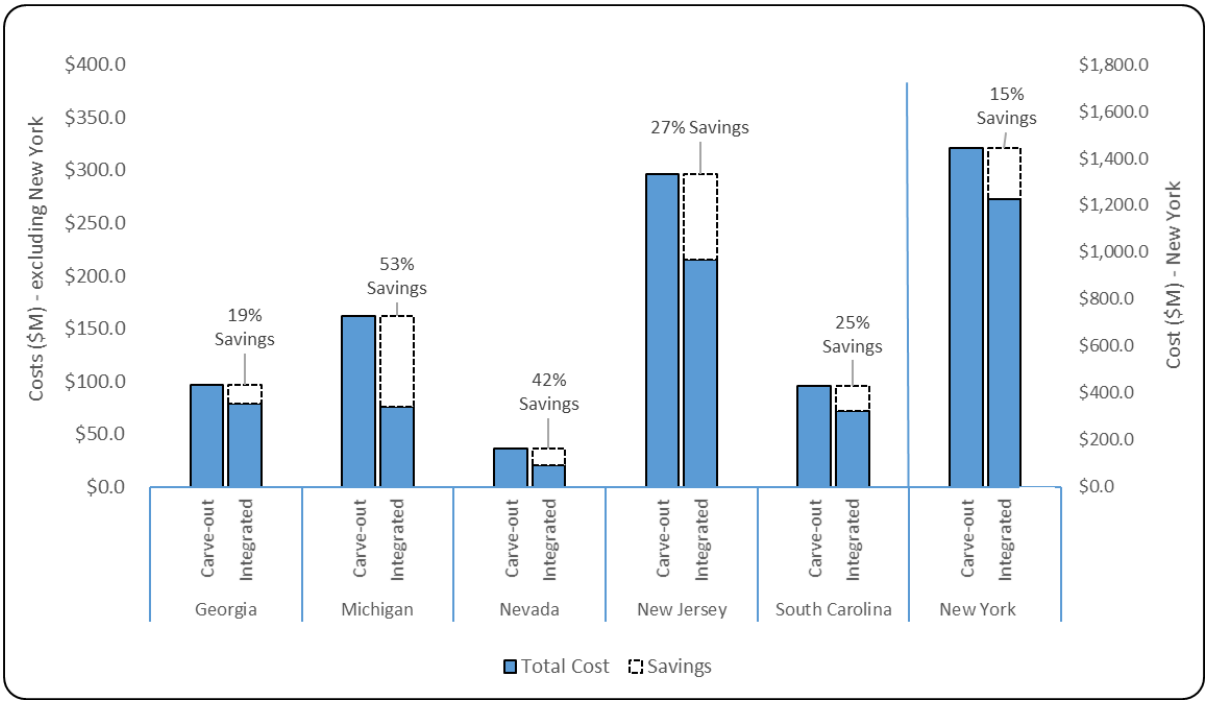
The primary drivers of the higher state expenditures under a carved-out model include:

- Increased drug costs (net of rebates) under Medicaid fee-for-service (FFS) contracts,
- Higher brand dispensing rates under Medicaid FFS preferred drug lists, and
- Loss of state premium tax revenue due to reduced capitation rates.

Wakely was retained by Centene Corporation (Centene) to evaluate the impact of integrated pharmacy benefits in managed Medicaid programs. This analysis reviews the cost implications of integrated pharmacy and carved-out models, as well as beneficiary service disruption considerations and differences in quality between these delivery methods.

Wakely analyzed 2018 pharmacy utilization data across the six states shown in Figure 1 to estimate the budgetary implications of differences between integrated and carved-out models. Our analysis compared integrated pharmacy utilization patterns by therapeutic class to programs utilizing state drug formularies. Associated differences in ingredient costs, dispensing fees, national and supplemental rebates, administrative costs, and premium taxes were evaluated to estimate relative costs between integrated and carved-out pharmacy models. The body of this report further details the actuarial methodology and assumptions used to demonstrate that integrated pharmacy models are more cost effective than carved-out models.

Figure 1: Total State Share of Rx Costs – Carve-out vs. Integrated Models*



**Note that NY results are represented on a separate scale due to its pharmacy costs being significantly higher than the other five states analyzed*

Wakely performed the actuarial analysis detailed in this report. As shown in Figure 1, our analysis identified state cost savings averaging 30% and ranging from 15% to 53% under an integrated model in the six states analyzed. We additionally received input from Centene clinical staff to understand their managed care functions, member experience insights, and related considerations. The information provided is reasonable, and is consistent with our experience working in the managed care industry. Where appropriate, we additionally reviewed outside source materials, including those cited in this report.

Additionally, both the direct managed care information provided and a review of available literature and studies indicate that integrated managed Medicaid pharmacy benefits provide better member experience and medical outcomes. For example, over 40 studies[5] have demonstrated increased integration in healthcare delivery leads to improvements on quality measures such as decreased lengths of hospital stays and fewer medication errors. This information indicates that members benefit from integrated pharmacy models because this model:

- Allows MCOs to access real-time pharmacy utilization, which increases the effectiveness of care coordination,
- Allows members to receive medical and pharmacy coverage through a common entity with a single point of contact, which is helpful in addressing concerns and reducing member confusion, and
- Contains quality platforms that benefit members by assisting pharmacies in identifying care gaps that require the linking of medications to disease states

The following sections of this report describe our analysis in detail.

Financial Analysis of Pharmacy Models: Integrated vs. Carved-Out

Wakely analyzed a sample of six states (Georgia, Michigan, Nevada, New Jersey, New York, and South Carolina) that currently offer members integrated pharmacy benefits, and estimated the financial impact of an alternate scenario where these states offered pharmacy benefits through a carved-out model.

Our analysis leveraged CY 2018 Medicaid State Drug Utilization Data (SDUD) for the selected states which is published by CMS as part of the Medicaid Drug Rebate Program (MDRP).[6] This data contains drug-level script utilization and paid amounts for MCO and Medicaid FFS delivery methods, excluding physician or facility administered drugs. Our analysis relied on the SDUD MCO data, which represents integrated pharmacy model costs. A financial analysis was performed to

[5] "The Complexity of Health Service Integration: A Review of Reviews" (17 publications) Marion Heyeres, Front Public Health. 2016; 4: 223. "Effects of integrated delivery system on cost and quality" (25 publications) Hwang W American Journal of Managed Care 2013 May 1;19(5):e175-84.

[6] https://www.medicaid.gov/medicaid/prescription-drugs/state-drug-utilization-data/index.html

compare these MCO costs against estimated costs under a potential carved-out model by evaluating the following six pharmacy benefit cost components:

1. Ingredient Cost and Dispensing Fees;
2. Drug Utilization Differences Due to Differing Preferred Drug Lists (PDLs);
3. National Rebates;
4. Supplemental Rebates;
5. Administrative Costs; and
6. Impact of Taxes and Underwriting Gain on MCO Capitation Rate Changes

Table A below shows the aggregate impact of these six components.[7] The methodology used to estimate the financial impact for each of these components is described in the following sections. The process described below was applied to each of the six states we evaluated unless otherwise specified**.**

Table A: Total State Share of Rx Costs – Carve-out vs. Integrated Models

State	Carved-Out Cost (State) ($M)	Integrated Pharmacy Savings (State)	
		Dollars ($M)	Percentage
Georgia	$96.5	$17.9	19%
Michigan	$162.0	$86.4	53%
Nevada	$35.9	$15.2	42%
New Jersey	$295.8	$80.7	27%
New York	$1,445.5	$217.7	15%
South Carolina	$95.6	$24.2	25%

1. Ingredient Costs and Dispensing Fees

MCOs generally use PBMs to provide integrated pharmacy services to members. MCO dispensing fees are typically much lower under integrated pharmacy models than in carved-out models. Per CMS guidelines,[8] state Medicaid agencies are required to set FFS fee schedule ingredient cost reimbursements based on their determination of each drug's "actual acquisition cost" (AAC).[9] States that implement an AAC-based payment methodology tend to have lower relative ingredient

[7] A detailed summary of results for each state is provided in Appendix C

[8] 42 CFR § 447.518

[9] States commonly limit FFS ingredient cost payments based on the lesser of some combination of the Medicaid federal upper limit (FUL), state maximum allowable cost (MAC), and usual and customary charges (U&C) in their determination of their AAC. As of March 2018, 38 states and the District of Columbia has approved AAC-based payments. (https://www.macpac.gov/wp-content/uploads/2015/09/Medicaid-Payment-for-Outpatient-Prescription-Drugs.pdf).

costs which results in higher dispensing fees that generally range between $9 and $12 per prescription.[10,11]

By comparison, MCOs typically pay approximately $1.00 in dispensing fees.[12] They also usually pay higher drug ingredient costs in integrated models than are paid under a FFS fee schedule in carved-out models. PBM spread pricing, the difference between the amount the PBM pays to a pharmacy and what is charged to MCOs, is a significant contributor to their higher historical ingredient costs. Spread pricing in Medicaid programs has come under scrutiny in recent years, and its use is declining in managed Medicaid programs.

We segmented SDUD MCO drug costs into ingredient costs and dispensing fees by assigning dispensing fees of $1.00 per prescription and allocating the remaining drug payments to ingredient costs. The MCO drug experience was then repriced to each state's Medicaid FFS fee schedule to estimate the unit cost differences under a carved-out model. Appendix A provides a summary of the Medicaid FFS fee schedules and dispensing fees for the six states analyzed. The six states selected represent a variety of different geographic locations, programmatic enrollment levels, and include both Medicaid expansion and non-expansion states.

Wakely relied on re-pricing analyses performed by Centene to estimate reimbursement under each state's FFS fee schedule. The approach involved applying the appropriate per-unit ingredient costs for each state, according to the schedules outlined in Appendix A, and adding the applicable dispensing fees. While we did not audit these analyses, we performed a high-level validation of their results by comparing their repriced ingredient costs to the estimated ingredient costs reflected in FFS experience within each state's SDUD. Though our approach has general limitations and known differences with Centene's results, our aggregated repriced amounts using the SDUD's FFS unit costs were generally consistent with the results.[13] Table 1 provides a summary of the repricing impact by state.

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[10] https://www.medicaid.gov/medicaid/prescription-drugs/state-prescription-drug-resources/medicaid-covered-outpatient-prescription-drug-reimbursement-information-state/index.html

[11] Any assessment of the adequacy of a state's payment for an outpatient prescription drug must take into account the combined amount of the ingredient cost and dispensing fee (i.e., a lower payment on one of the components may be compensated through higher payment on the other). Any time a state proposes a change to either the ingredient cost or dispensing fee components, federal regulations require that the state consider both the ingredient cost and dispensing fee together and ensure that the total payment to the pharmacy is consistent with federal payment requirements (42 CFR 447.518(d)) (CMS 2016a).

[12] The $1.00 dispensing fee represents a high-level average of 2018 dispensing fees observed across multiple Medicaid programs.

[13] Total repriced results leveraging SDUD FFS unit costs were within ± 4% for five of the six states which was deemed reasonable given the limitations of this approach, which include certain MCO-covered drugs not having FFS experience within the SDUD and thus having no proxy FFS unit cost available for repricing. The proportion of MCO spend for which a matching FFS drug was unavailable ranged between 10% and 50% for the six states analyzed. Other limitations include the SDUD capturing outpatient drugs administered in a physician setting (e.g., injectables) which may affect the reported units and general SDUD data quality issues (e.g., SDUD dollars or units reflected for certain drugs having invalid

Table 1: Summary of MCO Cost Impact on Federal and State costs from Repricing to the State's Medicaid FFS Fee Schedule

	Current MCO Costs			MCO Costs Repriced to Medicaid FFS Fee Schedule			
State	**Ingredient Costs ($M)**	**Dispensing Fees ($M)**	**Total Costs ($M)**	**Ingredient Costs ($M)**	**Dispensing Fees ($M)**	**Total Costs ($M)**	**Total Cost Difference ($M)**
Georgia	$441.8	$9.3	**$451.1**	$387.2	$99.1	**$486.3**	**$35.2**
Michigan	$966.9	$21.3	**$988.3**	$838.7	$192.1	**$1,030.8**	**$42.6**
Nevada	$297.2	$4.8	**$302.0**	$253.3	$48.5	**$301.8**	**($0.2)**
New Jersey	$1,444.2	$19.9	**$1,464.1**	$1,337.6	$217.4	**$1,555.0**	**$90.9**
New York	$5,065.2	$65.5	**$5,130.8**	$4,846.2	$660.7	**$5,506.9**	**$376.1**
South Carolina	$521.9	$5.6	**$527.4**	$570.9	$16.7	**$587.6**	**$60.2**

As expected, Table 1 shows that MCO ingredient costs are lower and dispensing fees are higher under each state's Medicaid FFS fee schedule. The increase in dispensing fees outweighs the lowered ingredient costs in five of the six states, resulting in material increases to overall Medicaid FFS pharmacy costs. For Nevada, total costs under the Medicaid FFS fee schedule are estimated to be approximately equal to MCO costs reported in the SDUD. While Nevada may show equitable costs between models, repricing to the State Medicaid FFS fee schedule is only one component to the overall change in cost facing states. We address the other components below.

Note that the MCO drug costs within the SDUD represent the amounts MCOs paid to their PBMs, which would include any spread pricing. As a result, any savings for the removal of spread pricing is captured in the Table 1 results.

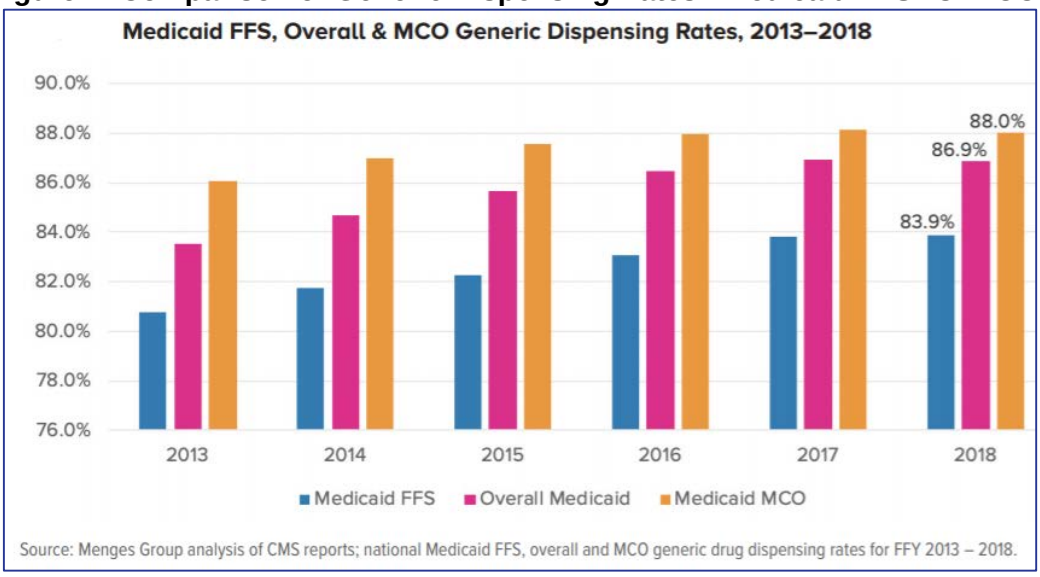
2. Drug Utilization Differences Due to Differing PDLs

MCOs operating under an integrated model use PDLs that vary from their respective state's FFS program. MCOs use PDLs to negotiate greater discounts with pharmaceutical manufacturers for allowing their drugs to be included on the PDL, and they can further limit the number of drugs on their PDL and design it to emphasize the use of generic drugs. States operating carved-out models are unable to limit the brand drugs on their PDLs due to their participation in the Medicaid Drug Rebate Program (MDRP). This program provides significant rebates, but it can limit the states' use of the most cost effective drugs.

entries). The sixth state, South Carolina, had materially lower FFS unit costs in the SDUD which is understood to be driven by their 2018 FFS fee schedule differing from their current fee schedule. As noted in Appendix A, their current fee schedule's ingredient costs are the lesser of (1) AWP less 16.0% and (2) WAC plus 0.8%. As recent as July 2019, these ingredient costs were the lesser of (1) FUL, (2), South Carolina MAC, (3) WAC plus 0.8%, or (4) U&C (http://southcarolina.fhsc.com/Downloads/provider/SCRx_ProviderManual_POS.pdf). Additionally, South Carolina is the only state analyzed that participates in the 340B program which could further cause lower FFS unit costs observed in the SDUD.

According to a recent study commissioned by the America's Health Insurance Plans,[14] MCOs dispense generics at higher rates than a carved-out model under FFS, as noted in Figure 2.

Figure 2: Comparison of Generic Dispensing Rates - Medicaid FFS vs. MCOs



The SDUD experience underlying our analysis reflects drug utilization under MCO-specific PDLs. Transitioning to a carved-out model requires the prescription drug benefit to be administered under the state's FFS formulary, which would impact the mix of drugs being utilized. The impact of this utilization shift was modeled by adjusting drug utilization within each therapeutic class using two different state benchmarks to develop a range of results. The selected state benchmarks include:

- A state that currently uses a carved-out pharmacy model (State PDL Scenario A)
- A state where MCOs administer a single state-controlled PDL (State PDL Scenario B)

Table 2 provides a summary of the drug costs and generic dispensing rates under the current MCO PDL and alternate State PDL scenarios.

[14] https://www.ahip.org/wp-content/uploads/AHIP-MMCResearch_RxDrugs.pdf

Table 2: Estimated Cost and Generic Dispensing Rate (GDR) Impact Under Integrated and Alternative State PDL Scenarios

	MCO PDL		Scenario A PDL				Scenario B PDL			
State	Total Cost ($M)	GDR	Total Cost ($M)	GDR	Diff from MCO Total Cost ($M)	Diff from MCO GDR	Total Cost ($M)	GDR	Diff from MCO Total Cost ($M)	Diff from MCO GDR
Georgia	$486.3	92.9%	$574.1	89.4%	**$87.8**	**-3.5%**	$562.8	87.9%	**$76.5**	**-5.0%**
Michigan	$1,030.8	90.9%	$1,187.7	89.6%	**$156.9**	**-1.3%**	$1,183.5	89.0%	**$152.6**	**-1.9%**
Nevada	$301.8	88.5%	$348.2	86.8%	**$46.4**	**-1.7%**	$350.0	87.2%	**$48.2**	**-1.2%**
New Jersey	$1,555.0	90.7%	$1,785.0	88.0%	**$230.0**	**-2.7%**	$1,801.0	86.7%	**$246.0**	**-4.0%**
New York	$5,506.9	89.3%	$5,946.7	86.9%	**$439.8**	**-2.3%**	$6,041.0	86.2%	**$534.1**	**-3.1%**
South Carolina	$587.6	86.6%	$626.5	84.2%	**$38.8**	**-2.4%**	$613.3	83.5%	**$25.7**	**-3.1%**

States controlling their PDLs typically exhibit lower GDRs than those that utilize individual MCO formularies, as the states are more restricted in limiting their PDLs than the MCOs. The estimates shown in Table 2 indicate that both the Scenario A (*"pharmacy benefit carved-out")* and Scenario B (*"MCOs administering a single state-controlled PDL")* result in lower generic dispensing rates which leads to higher pharmacy costs.

3. National Rebates

Prior to most states moving to managed Medicaid for medical and pharmacy services, Congress created the Medicaid Drug Rebate Program (MDRP) in 1990. The MDRP requires drug manufacturers to enter into a federal rebate agreement for their drugs to be covered under Medicaid. Under the agreement, manufacturers must pay states statutory rebates based on the utilization of their drugs which are in turn shared with the federal government. The current rebate amounts are the lesser of (a) 23.1% of the drug's average manufacturer price (AMP) or (b) the difference between AMP and the lowest price negotiated by private payers for brand name drugs and 13% of AMP for generic drugs.[15]

We reviewed national rebates from the publically-available Form CMS-64 data[16] for the six integrated pharmacy states to estimate how transitioning to a carved-out pharmacy benefit would increase national rebates due to higher brand drug utilization. These higher national rebates are offset by higher brand drug and administrative costs. The average rebate percentage for each state from FY 2016 and FY 2017 (the most current two years available) was used as a proxy for CY 2018 national rebates to account for year-to-year variation and to mitigate any potential reporting issues inherent in the data. Since rebates primarily apply to brand drugs, national rebate amounts were estimated for the two carved-out scenarios in each state by adjusting aggregate rebate amounts by the change in repriced brand drug costs. Table 3 provides a summary of the

[15] While most brand drug rebates are based on 23.1% of AMP, certain pediatric and clotting brand drugs have a lower rebate of 17.1% of AMP. There is also an inflationary component included in the final rebate calculation to account for the rising cost of drugs. (https://www.kff.org/medicaid/issue-brief/understanding-the-medicaid-prescription-drug-rebate-program/)

[16] https://www.medicaid.gov/medicaid/financial-management/state-expenditure-reporting-medicaid-chip/expenditure-reports-mbescbes/index.html

national rebate percentages observed in the Form CMS-64 data and the resulting national rebate percentages for the two State PDL scenarios for each state.

Table 3: Estimated CY 2018 National Rebates in Current Integrated Model and State PDL Scenarios

	Current Carve-In Model	State PDL Benchmark State A		State PDL Benchmark State B	
State	Total ($M)	Est. Total ($M)	Diff from Carve-in Total ($M)	Est. Total ($M)	Diff from Carve-in Total ($M)
Georgia	$175.9	$258.9	$83.0	$247.3	$71.4
Michigan	$443.8	$537.1	$93.4	$549.7	$105.9
Nevada	$121.5	$140.2	$18.7	$146.3	$24.8
New Jersey	$672.1	$824.1	$152.0	$848.8	$176.7
New York	$2,565.4	$2,979.5	$414.1	$2,976.1	$410.7
South Carolina	$203.9	$229.6	$25.8	$230.1	$26.2

Table 3 indicates that estimated national rebates retained through the MDRP are greater under the two State PDL benchmark models, which is largely driven by the higher brand drug utilization.

4. Supplemental Rebates

In addition to the national rebates retained under the MDRP, MCOs and states are able to negotiate supplemental rebates with drug manufacturers for preferential status on their PDLs. The transition to a carved-out model will result in MCO supplemental rebates being replaced by the supplemental rebates achieved by the state. To assess this impact, MCO supplemental rebate information was collected to estimate the expected rebates achieved for an integrated model. Supplemental rebates under a carved-out model were estimated using state-achieved supplemental rebate information from the same Form CMS-64 reports that national rebate data was sourced. Table 4 summarizes the resulting supplemental rebates estimates and their source.

Table 4: Estimated Supplemental Rebates under Integrated and Carved-out Models

State	Estimated Rebate Percentages		Data Source: Carve-Out Percentages
	Est. MCO Rebate % (Integrated)[17]	Est. State Rebate % (Carve-out)	
Georgia	4.3%	3.4%	FY17 data from GA Form CMS-64 reports
Michigan	3.2%	4.0%	FY17 data from MI Form CMS-64 reports
Nevada	4.4%	1.6%	FY17 data from NV Form CMS-64 reports
New Jersey	4.3%	3.0%	NJ Supplemental rebates in Form CMS-64 reports are invalid so 3.0% was assumed based on the high-level average observed in other states
New York	4.3%	3.7%	FY17 data from NY Form CMS-64 reports
South Carolina	3.0%	4.8%	FY17 data from SC Form CMS-64 reports

Table 4 indicates that supplemental rebates percentages are generally similar between MCOs and states.

5. Administrative Costs

MCOs provide various administrative functions under integrated pharmacy models. Centene provided a list of typical administrative and technical functions, which is included in Appendix B.

For a carved-out model, many of the current administration function of the drug benefit must be replicated by the state, increasing their administrative costs while the cost of administering other benefits remain with MCOs. In addition, there may be additional administrative costs incurred for new processes to ensure efficient data exchange between the MCOs and the state or their single PBM vendor. These functions include:

- reporting and operations to enable coordination with medical benefits,
- separate enrollment card printing and fulfillment,
- system infrastructure to share and reconcile pharmacy data with the MCOs (ideally on a real-time basis to enable care management), and
- establishing web-based portals for rapid data exchange.

States currently operating an integrated program may already fulfill some of these administrative duties if they cover a subset of Medicaid members. However, transitioning to a carved-out program may result in additional costs as states scale up their operations to handle the additional load of covering significantly more members. Given the list of administration needs may increase under a

[17] Current supplemental rebates under integrated pharmacy models were procured from various sources, including state capitation rate setting documentation, other documentation provided by individual states, and Centene/Wellcare-specific rebate percentages provided by Centene.

carved-out model, it is reasonable to expect that the administration costs could exhibit a corresponding increase.[18]

The administrative cost impact associated with transitioning to a carved-out model is beyond the scope of this analysis. As a result, an administrative cost assumption of $2.50 per script was assumed for both integrated and carved-out models.

The administrative costs incorporated in capitation rates under an integrated model or incurred by the state under a carved-out model are largely federally funded.[19] While no change in total administrative costs are assumed in this analysis, transitioning to a carved-out model may result in a change to the amount of this federal funding that is retained by the state. For capitation rates, the proportion retained by the state depends on the differing Federal Medical Assistance Percentages (FMAP) for each covered Medicaid population and their relative proportion of pharmacy expenditures within a given state. The proportion of pharmacy spend for each Medicaid population was sourced from available capitation rating documents and monitoring reports. Table 5 provides a summary of the FMAP by population and the estimated pharmacy benefit-specific FMAP across all populations.

Table 5: Summary of FY 2020 FMAP Levels by Medicaid Population and the Estimated Rx-specific FMAP Across All Populations[20]

State	Medicaid	CHIP	ACA Expansion	Estimated Total FMAP for Rx
Georgia	67.3%	88.6%	n/a	69.7%
Michigan	64.1%	86.3%	90.0%	75.4%
Nevada	63.9%	86.3%	90.0%	83.9%
New Jersey	50.0%	76.5%	90.0%	68.9%
New York[21]	50.0%	76.5%	90.0%	50.0%
South Carolina	70.7%	91.0%	n/a	78.2%

[18] It is possible that states may engage in fewer medical management activities under a carved-out model than those undertaken by MCOs under a corresponding integrated model. Fewer medical management activities may yield initial administrative savings but result in higher incurred pharmacy expenses. This analysis assumes no reduction in administrative expenses for foregone medical management activities under a carved-out model. We have similarly assumed no increase in aggregate pharmacy utilization under a carved-out model. Taken together, we believe these assumptions are conservative, as medical management is believed to result in cost decreases on an aggregate (combined administrative and incurred claim cost) basis.

[19] Federal fiscal year (FFY) 2021 (October 2020 through September 2021) standard Medicaid FMAP rates vary by state between 50% (several states) and 77.8% (Mississippi) before consideration of the temporary 6.2% FMAP increase under the Families First Coronavirus Response Act. This statement assumes that a program's FMAP is proportionally attributable to all components of the capitation rates, including MCO administrative costs.

[20] The percentages noted in Table 5 do not consider the temporary 6.2% FMAP increase under the Families First Coronavirus Response Act (https://www.medicaid.gov/state-resource-center/downloads/covid-19-section-6008-faqs.pdf)

[21] For New York, only the traditional Medicaid population with FMAP of 50.0% is considered in this analysis since CHIP and ACA Expansion are separate standalone programs in the state.

The administrative cost impact to state funding depends on how this pharmacy benefit-specific FMAP compares to the estimated FMAP for costs incurred by the state while administering the pharmacy benefit. To estimate this state-specific FMAP, 30% of pharmacy costs were assumed to be attributable to state staff operations, which has an approximate FMAP of 60%,[22] and the remainder is assumed to be related to administrative functions for the pharmacy benefit, which has a 75% FMAP. This resulting FMAP of 70.5%[23] was assumed for all states.

6. Impact of Taxes and Underwriting Gain on MCO Capitation Rate Changes

Capitation rates paid to MCOs in a managed Medicaid environment are based on expected claim cost and administrative costs plus a provision for underwriting gain and the state MCO premium tax (where applicable). Therefore, the state will lose part of the MCO premium tax revenue if pharmacy is no longer integrated with other MCO services. Capitation rate payments will decrease under a carved-out model since the administrative costs, premium taxes, and underwriting gain will no longer apply to the prescription drug component of the capitation rates. The removal of the underwriting gain portion attributable to pharmacy costs results in a cost savings under the carved-out model, other things equal. The elimination of premium taxes associated with integrated pharmacy expenditures will result in a revenue reduction to the state, since it represents a portion of capitation rate payments which is largely federally funded, whereas all premium tax receipts are retained by the state. Therefore, if a state carves out the pharmacy benefits, then the state may need to review other budgetary relief options to offset any loss in federal funding the state receives through the integrated pharmacy premium tax FMAP payments.

We applied the following process to estimate the impact of a carve-out model on underwriting gain and premium taxes:

- Total prescription drug-specific capitation revenue was estimated by applying an administrative and underwriting gain load equivalent to 4% of premium on total current MCO pharmacy costs as reported in the SDUD
- This amount was reduced by supplemental rebates using the percentages in Table 4
- Aggregate underwriting gain and premium tax dollars were estimated from total revenue using information contained in each state's capitation rate development documentation
- The pharmacy benefit-specific FMAPs from Table 5 were applied to the calculated underwriting gain and premium tax amounts to estimate the impacts under a carved-out model.

[22] The 60% figure assumes 40% of costs are associated with skilled professional medical staff and/or information technology staff (which generally have FMAPs of 75%) and 60% of costs are associated with other staff (50% FMAP),

[23] 70.5% = 30% * 60% + (1 – 30%) * 75%

Tables 6A and 6B provide a summary of the cost savings from reduced underwriting gain in capitation rates and the estimated decrease in state revenue from reduced premium taxes, respectively.

Table 6A: Estimated Cost Savings from Underwriting Gain Impact Under a Carved-out Model

State	Estimated Rx-specific Cap Revenue ($M)	Underwriting Gain %	Estimated FMAP for Rx	Estimated Federal and State Savings ($M)	Estimated State Savings ($M)
Georgia	$449.7	1.0%	69.7%	$4.5	$1.4
Michigan	$996.5	1.4%	75.4%	$14.0	$3.4
Nevada	$300.7	1.4%	83.9%	$4.3	$0.7
New Jersey	$1,460.3	1.0%	68.9%	$14.6	$4.5
New York	$5,115.0	1.0%	50.0%	$51.1	$25.6
South Carolina	$600.0	1.0%	78.2%	$6.0	$1.3

Table 6B: Estimated State Revenue Reduction from Premium Tax Impact Under a Carved-out Model[24]

State	Estimated Rx-specific Cap Revenue ($M)	Premium Tax %	Estimated FMAP for Rx	Estimated Reduction in State Funding ($M)
Georgia	$449.7	2.25%	69.7%	$7.2
Michigan	$996.5	8.20%	75.4%	$67.1
Nevada	$300.7	3.41%	83.9%	$8.9
New Jersey	$1,460.3	3.10%	68.9%	$32.2
New York	$5,115.0	2.00%	50.0%	$52.2
South Carolina	$600.0	0.00%	78.2%	$0.0

Aggregate impact of each of the Pharmacy Benefit Components

The estimated financial impact for each of the pharmacy benefit components described above were combined to assess the total savings/cost of the pharmacy program under an integrated pharmacy benefit model. The analysis was performed separately for each state under both State PDL benchmark scenarios (Scenarios A and B). Table 7 provides the financial impact for New York based on the average results from both scenarios. Appendix C includes the estimated financial impact by scenario and state.

[24] The proposed CMS Medicaid Fiscal Accountability Rule (CMS-2393-P) has the potential to impact the premium taxes applied in various state Medicaid programs. This analysis does not attempt to quantify this impact (if any), and relies on premium tax arrangements currently present in each of the six states studied.

Table 7: New York: Estimated Financial Impact of a Carved-out Model (Average of Scenarios A and B)

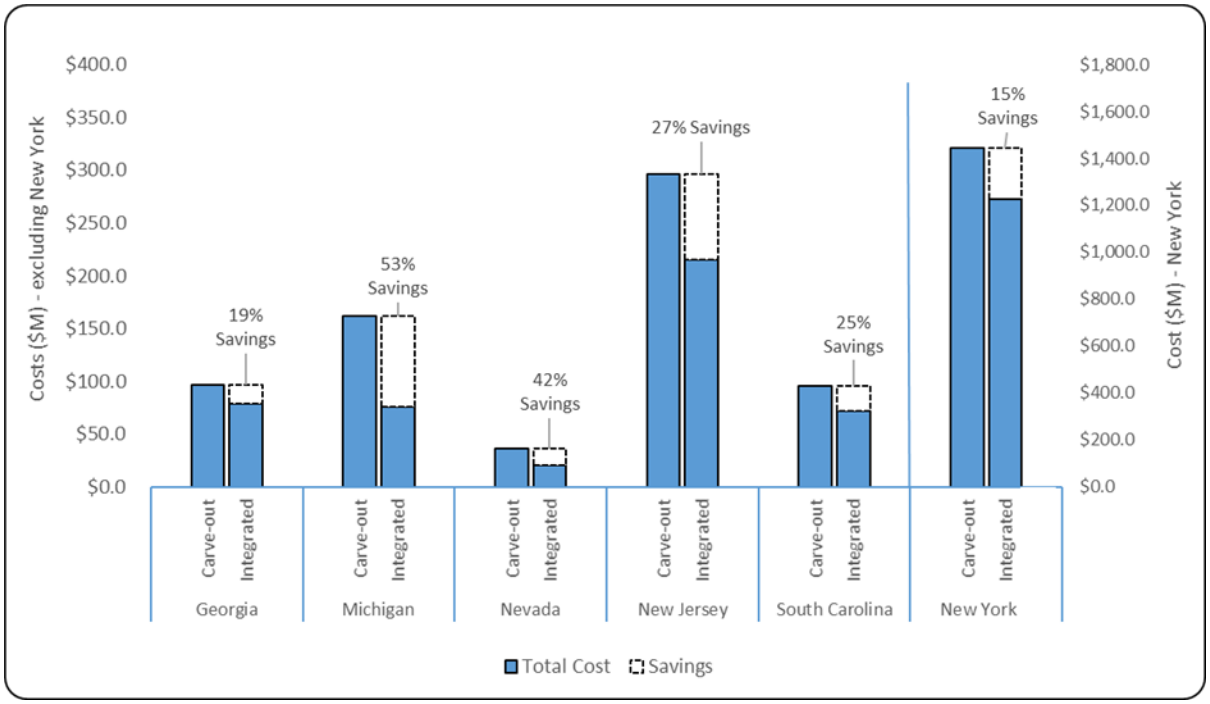
	Total State and Federal Shares		State Share Only**	
Pharmacy Model Comparison (annual cost projections)	**Carve-In Model (Current Model)**	**Carve-Out Model**	**Carve-In Model (Current Model)**	**Carve-Out Model**
Pharmacy Ingredient Cost	$ 5,065,219,079	$ 4,846,238,100	$ 2,532,609,540	$ 2,423,119,050
Pharmacy Dispensing Fee	$ 65,542,764	$ 660,671,061	$ 32,771,382	$ 330,335,531
Single PDL Adjustment***	$ -	$ 486,969,359	$ -	$ 243,484,680
Medicaid Drug Rebate Program Rebates	$ (2,565,380,922)	$ (2,977,785,754)	$ (1,282,690,461)	$ (1,488,892,877)
Supplemental Rebates	$ (220,407,852)	$ (221,773,505)	$ (110,203,926)	$ (110,886,753)
Administration Costs	$ 163,856,910	$ 163,856,910	$ 81,928,455	$ 48,337,788
MCO Premium Tax Revenue*	$ -	$ -	$ (52,193,389)	$ -
MCO Underwriting Gain	$ 51,149,521	$ -	$ 25,574,760	$ -
Total Impact	$ 2,559,979,501	$ 2,958,176,171	$ 1,227,796,362	$ 1,445,497,419
Carve-In Model Annual (Cost)/Savings =	$ 398,196,670		$ 217,701,057	

Analysis based on calendar year 2018 New York Medicaid Drug Utilization Data from data.Medicaid.gov
*** The state receives a match on premium tax and receives the full tax returned as revenue, so it decreases costs.**
**** Assumes FMAP of 50.0% for Medicaid for non-admin components.**
Assumes FMAP of 75% for administration costs and 60% for staff staffing costs to support the pharmacy carve-out model.
***** Additional cost due to moving from MCO drug mix to State PDL drug mix.**

The analysis above estimates that the state of New York would spend over $217M more by moving to a carve-out model for pharmacy.

Figure 3 summarizes each state's proportion of estimated pharmacy costs under a carved-out model and their savings under an integrated model. These results reflect the average of Scenarios A and B. Appendix D provides the estimated financial impact on Medicaid expenditures segmented by state and federal components.

Figure 3: Total State Share of Rx Costs – Carve-out vs. Integrated Models[25,26]



State premium taxes are partially federally funded at the applicable FMAP rate. However, the state retains the entirety of the tax receipts including the amounts funded by the federal government. As a result, states with premium taxes generally exhibit larger rates of savings due to the retention of the Federally-financed portion of the state premium tax. High state premium taxes contribute significantly to the elevated savings estimated for Michigan and Nevada.

Value of Integrated Pharmacy

The following sections of this report relate to qualitative benefits of integrated pharmacy models and managed care. We received significant input from Centene clinical staff to inform these sections. The information provided is reasonable, and is consistent with our experience working in the managed care industry. Where appropriate, we additionally reviewed outside source materials, some of which are referenced herein.

[25] Note that NY results are represented on a separate scale due to its pharmacy costs being significantly higher than the other five states analyzed

[26] Michigan exhibits higher savings that is largely driven by the state premium tax, which is significantly higher than in other states and results in Michigan collecting more federal dollars for Medicaid. Federal cost savings are offset by the higher federal premium tax spending.

Integrated Models Allow for Whole Person Care

Analysis and management of prescription drug utilization is central to a member's care. It is critical to effective management of chronic diseases and the promotion of preventative solutions that minimize member risk for drug interactions, and it can limit the need for utilization of costly acute care services resulting from non-compliance and/or unnecessary disease progression.

Integrated benefits allow MCOs to improve care coordination, deliver whole-person care, and have timely visibility into member needs. According to the National Association of State Budget Officers, Medicaid is the largest program operated by states - accounting for 28.9%[27] of all spending in 2019. State policy makers face critical decisions regarding the programmatic design that will best serve Medicaid beneficiaries and taxpayers; FFS or managed Medicaid programs utilizing MCOs; and further, whether managed care is best suited for administering integrated benefits including coverage of prescription drugs. In considering these options, it is critical that policy makers recognize the important value proposition Medicaid managed care offers with regard to creating a fiscally sustainable program focused on improving member outcomes.

A recent report by The Menges Group highlights various activities undertaken by Virginia Medicaid MCOs to support member access and adherence.[28] The report also cites several examples where MCO activities resulted in improved member outcomes. Cited examples highlighted in the report include:

- A MCO care coordinator working with a member who lacked addiction research and treatment or substance use disorder providers in her geographic vicinity to acquire a 90-day continuity of care override to obtain a Suboxone prescription to maintain adherence.
- A MCO pharmacist working with a member's caretaker to ensure understanding of her asthma condition, proper inhaler use and benefits, and her other prescribed medications.

In recent years, industry trends to alleviate high health care costs have shifted towards value-based care models. Integrating pharmacy is critical to successful administration of these models. In addition, integrated pharmacy benefits provide increased budget predictability for states which is important given current state budget challenges. Fractured care across multiple providers, information systems, and payers contributes to higher costs and a less streamlined member experience.[29] MCOs are uniquely positioned to combine management of both medical and pharmaceutical benefits, which allows for integrated care coordination and care management for members. In addition to the lower prescription drug expenditures associated with integrated

[27] https://higherlogicdownload.s3.amazonaws.com/NASBO/9d2d2db1-c943-4f1b-b750-0fca152d64c2/UploadedImages/Fiscal%20Survey/NASBO_Fall_2019_Fiscal_Survey_of_States_S.pdf

[28] https://www.themengesgroup.com/upload_file/virginia_pharmacy_carve-out_assessment_january_2020.pdf

[29] http://www.lewin.com/content/dam/Lewin/Resources/Site_Sections/Publications/MHPAPaperPharmacyCarve-In.pdf

pharmacy models, one study found that integrated designs were also associated with significantly lower member medical costs, as well as lower rates of hospitalization and emergency department visits.[30]

A meta-analysis that included 218 studies with over 150,000 subjects shows that interventions targeted at providers significantly improved medication adherence.[31] Medication adherence has a significant impact on health outcomes. When pharmacy and medical benefits are integrated, providers will be better able to design and implement interventions to improve medication adherence. With real time information, a single point of contact, and quality platforms that can identify care gaps, MCOs can improve the various factors that influence medication adherence and subsequently improve quality and reduce cost.

The integration of medical and pharmacy services is merely one type of integration. Any reduction on medical and pharmacy integration could lead to difficulty in integrating healthcare services across the care continuum, such as primary care and specialists, behavioral health or other specialties. Integration can also have an impact on adults with chronic medical conditions. According to the results of another meta-analysis, greater integration leads to reduced mortality, reduced hospital admissions and re-admissions, improved adherence to treatment guidelines, and better quality of life.[32]

Real-Time Data

Centene has indicated that access to real-time data is necessary in order for MCOs to provide timely management of preventable drug utilization. We understand that states utilizing carved-out models may experience pharmacy data delays, which can significantly limit MCOs' ability to effectively manage care. Under an integrated pharmacy model, Medicaid MCOs generally have access to real-time pharmacy data. The timely availability of data supports effective care coordination and delivery of appropriate care in an appropriate setting. MCOs have complex data infrastructure tools and invest their own capital to use advanced data analytics in an effort to improve care and reduce fraud, waste, and abuse.

Feedback from Centene highlights various ways that MCOs ensure timely care is delivered to members, including:

- More efficient point of sale prior authorizations, accurate medical management, as well as ensuring a person-centered member experience;

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[30] *Value of Managed Care Organizations and Pharmacy Benefit Managers in Managing the Medicaid Prescription Drug Benefit*, The Menges Group, October 2019.

[31] Conn, T.M. et al. (2015). Healthcare provider targeted interventions to improve medication adherence: systematic review and meta-analysis. *Int J Clin Pract.* John Wiley & Sons Ltd. 69, 8, 889–899. doi: 10.1111/ijcp.12632.

[32] Martinez-Gonzalez, N. A. et al. (2014). Integrated care programmes for adults with chronic conditions: a meta-review. International Journal for Quality in Health Care. Volume 26, Number 5. pp. 561–570. Retrieved from http://creativecommons.org/licenses/by-nc-nd/4.0/.

- Coordinating prescription drug authorizations as part of inpatient discharge planning, ensuring all outpatient authorizations are in place and fills are readily obtained when the member leaves the hospital;
- Arranging durable medical equipment to accompany medications as necessary and for services such as home care providers to administer specialized drugs;
- Conducting critically time sensitive care management activities following hospital discharge, such as medication;
- Providing dose optimization and tracking services by monitoring a member's medical outcomes from the use of high-cost, high-risk medications, interfacing in between fills with treating providers and pharmacies to evaluate member tolerance, supply-on-hand, and clinical results to ensure appropriate and safe dosing titration;
- Reducing preventable readmissions by ensuring optimal transitional care from acute and non-acute settings by conducting post-hospitalization outreach to members to verify they understand their discharge instructions, follow up with primary care providers, receive medication reconciliation, and ensuring the highest-risk members are linked with a Community Health Worker; and
- Identifying members currently in hospitals and having pharmacists or nurse care managers conduct medication reconciliation between their admission medications and their discharge medications.

MCOs are equipped to leverage real-time pharmacy data to conduct time sensitive care management activities following hospital discharge. As demonstrated in a peer-reviewed study, the number of medications an individual receives as they are discharged from the hospital is associated with readmissions.[33] It follows that MCO activities such as medication reconciliation may have the potential to reduce inpatient readmissions.

Pharmacy Cost Volatility and Value-Based Payment Considerations

Integrated pharmacy models also insulate state budgets from volatility in prescription drug costs. Under integrated models, fluctuations in drug prices and the risk of rising drug costs is typically borne by the MCOs, resulting in greater state budget certainty. Under a carved-out model, states are at risk for prescription drug cost volatility. Exposure to this volatility creates additional risk for states, as pharmacy costs have increased substantially in recent years.[34]

Under an integrated pharmacy model, MCOs can more effectively manage pharmaceutical costs and increase the use of cost-effective, high quality generics instead of brand drugs. A recent study found the national average net cost per prescription was 27.2% lower in the Medicaid MCO setting

[33] Picker, D et al. *The Number Of Discharge Medications Predicts Thirty-Day Hospital Readmission: A Cohort Study*. BMC Health Services Research, 15 (282), July 2015 (https://doi.org/10.1186/s12913-015-0950-9)

[34] https://www.express-scripts.com/corporate/drug-trend-report#2019-by-the-numbers

than the Medicaid FFS setting.[35] Many larger MCOs are able to leverage purchasing and negotiating power through their national contracts with drug manufacturers in rebate negotiations.

State Medicaid programs also continue to expand their use of value-based payment (VBP) arrangements in recent years. These arrangements seek to restructure financial incentives to reward providers for delivering coordinated, high-quality care for Medicaid members. Whereas traditional FFS arrangements reward providers for the volume of services they provide, financial incentives within value-based payment systems are structured to promote value, improved health outcomes, and contain costs.

VBP arrangements align well with managed care, as both structures seek to provide efficient and cost-effective care delivery. VBP in managed care seeks the use of generics and proper medication reconciliation in order to keep members healthy and decrease the likelihood of non-adherence or avoidable lapses in chronic disease management.

Conclusion

Our analysis indicates that, when compared to integrated pharmacy benefits, carved-out pharmacy programs result in materially higher state expenditures. Additionally, direct managed care experience (provided by Centene) and available information in published studies indicate that carved-out models display lower levels of member service coordination, as well as increased fragmented care and administrative complexity. Integrated pharmacy models managed under MCO contracts can lead to improved member outcomes through a fiscally sustainable program focused on high-level care management, integration with community based services, public health, and value based payments.

In the wake of the COVID-19 pandemic, states will likely be facing significant short, medium, and long-term Medicaid budget challenges. Constrained budgets will make it difficult for states looking for financial savings to implement a more expensive carve-out model. States considering a transition to a carved-out model should consider the need to create predictability in their budgets and the potential savings achieved in an integrated model.[36]

[35] *Assessment of Medi-Cal Pharmacy Benefits Policy Options*. The Menges Group, May 2019.

[36] While not considered directly in our analysis, it should be noted that the temporary FMAP increase from the Families First Coronavirus Response Act will further advantage states with integrated pharmacy models due to the increased pharmacy premium taxes retained by the state.

Disclosures and Limitations

Responsible Actuaries. Taylor Pruisner and Sam Rickert are the actuaries responsible for this communication. They are Members of the American Academy of Actuaries and Fellows of the Society of Actuaries. They meet the Qualification Standards of the American Academy of Actuaries to issue this report. Michael Cohen also contributed to this report.

Scope of Services. Unless otherwise explicitly indicated, Wakely's work is limited to actuarial estimates and related consulting services. Wakely is not providing accounting or legal advice. Centene should retain its own experts in these areas. In addition, Centene is responsible for successful administrative operations of all of its programs, including those which are the subject of Wakely's actuarial work. If Centene is not able to successfully operate these programs at levels assumed in Wakely's estimates, and which may meet or exceed those of its competitors, actual results may vary adversely, potentially significantly. Further, Wakely strongly recommends that Centene carefully monitor emerging experience in order to identify and address issues as quickly and completely as possible.

Intended Users. This information has been prepared for the sole use of the management of Centene and cannot be relied on by any third party without the prior written permission of Wakely.

Risks and Uncertainties. The assumptions and resulting estimates included in this report and produced by the model are inherently uncertain. Users of the results should be qualified to use it and understand the results and the inherent uncertainty. Actual results will likely vary, potentially materially, from our estimates. Wakely does not warrant or guarantee that Centene will attain the projected values included in the report. It is the responsibility of the organization receiving this output to review the assumptions carefully and notify Wakely of any potential concerns. Many of the operational considerations and observations included in this report were based on input from Centene. Certain operational aspects may not be generalizable to other MCOs, depending on their individual circumstances and business practices.

Conflict of Interest. The responsible actuaries and consultants are financially independent and free from conflict concerning all matters related to performing the actuarial services underlying this analysis. In addition, Wakely is organizationally and financially independent to Centene.

Data and Reliance. Wakely relied on the re-pricing work performed by Centene to estimate reimbursement under each state FFS fee schedule, as described in this report. We performed a high-level validation of the results by comparing Centene's repriced ingredient costs to estimated ingredient costs reflected in FFS experience within each state's SDUD and found their results to be reasonable. We have not performed an independent audit of the repricing work. If the underlying information is incomplete or inaccurate, our estimates may be impacted, potentially significantly. We additionally received input from Centene clinical staff to understand their managed care functions, member experience insights, and related considerations. The information provided by Centene is reasonable, and is consistent with our managed care industry experience.

Subsequent Events. This analysis does not explicitly account for the potential impact of COVID-19 and any related recent or future federal or state legislation or regulatory changes on MCOs or the Medicaid program. This includes changes to FMAP matching levels, changes to cost-sharing protections for Medicaid beneficiaries, and potential changes to enrollment and utilization as a result of any economic changes. There are no other known relevant events subsequent to the date of information received that would impact the results of this report.

Contents of Actuarial Report. This document and the supporting exhibits/files constitute the entirety of actuarial report and supersede any previous communications on the project.

Deviations from ASOPS. Wakely completed the analysis using sound actuarial practice. To the best of my knowledge, the report and methods used in the analysis are in compliance with the appropriate Actuarial Standards of Practice (ASOP) with no known deviations.

Sincerely,

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Appendix A

Medicaid FFS Fee Schedule for Six States Analyzed

State	Ingredient Costs	Dispensing Fee
Georgia	Lesser of: - The Georgia Maximum Allowable Cost (GMAC), - The Georgia Estimated Actual Acquisition Cost (GEAC), - FUL, - The usual and customary charge or the submitted ingredient cost - The Select Specialty Pharmacy Rate (SSPR)	$10.63
Michigan	Lesser of: - NADAC - WAC - MAC - U&C	- $20.02 for specialty drugs - $10.80 for drugs preferred on PDL - $10.64 for drugs not on PDL - $9.00 for drugs on PDL but non-preferred[37]
Nevada	Lesser of: - NADAC - FUL - SMAC - U&C	$10.17
New Jersey	Lessor of: - NADAC - WAC minus 2% - SWP minus 19%	$10.92
New York	Lesser of: - NADAC - WAC less 3.3% (Brand) - WAC less 17.5% (Generic) - FUL - SMAC - U&C	$10.08
South Carolina	Lesser of: - AWP minus 16.0% - WAC minus 0.8%	$3.00

[37] A $9.00 dispensing fee was applied to all drugs for Michigan for conservatism

Appendix B

Selected MCO administrative functions

- Coordination with medical benefits;
- Clinical programs;
- Chronic disease management integration;
- Pharmacist support;
- Enrollment card print and fulfillment;
- Rapid resolution of exception requests;
- Enrollment and eligibility verification;
- Network management;
- Customer service;
- Patient adherence programs;
- Patient safety programs; and
- Utilization management tools.

Selected technical functions supporting administration pharmacy benefits

- System infrastructure to send pharmacy encounter data to health departments;
- Reporting and analysis for financial and clinical programs;
- Fraud, waste and abuse programs;
- Provider measurement tracking and administration;
- Audit functions;
- Trend forecasting;
- New drug pipeline identification; and
- PDL management and establishment of web-based tools.

Appendix C – Georgia

Financial Impact to Georgia Under a Carved-out Model
(Scenario A - State that currently uses a carved-out pharmacy model)

	Total State and Federal Shares		State Share Only**	
Pharmacy Model Comparison (annual cost projections)	**Carve-In Model (Current Model)**	**Carve-Out Model**	**Carve-In Model (Current Model)**	**Carve-Out Model**
Pharmacy Ingredient Cost	$ 441,761,243	$ 387,164,453	$ 133,724,044	$ 117,197,235
Pharmacy Dispensing Fee	$ 9,321,345	$ 99,085,897	$ 2,821,633	$ 29,993,955
Carve-Out Model PDL Impact	$ -	$ 87,847,373	$ -	$ 26,591,980
Subtotal	$ 451,082,588	$ 574,097,724	$ 136,545,677	$ 173,783,170
Medicaid Drug Rebate Program Rebates	$ (175,922,209)	$ (258,918,073)	$ (53,252,814)	$ (78,376,210)
Supplemental Rebates	$ (19,396,551)	$ (19,519,323)	$ (5,871,464)	$ (5,908,628)
Administration Costs	$ 23,303,363	$ 23,303,363	$ 7,054,082	$ 6,874,492
CMO Premium Tax Revenue*	$ -	$ -	$ (7,217,355)	$ -
CMO Underwriting Gain	$ 4,496,730	$ -	$ 1,361,190	$ -
Total Impact	$ 283,563,920	$ 318,963,690	$ 78,619,315	$ 96,372,824
Carve-In Model Annual (Cost)/Savings =	$ 35,399,771		$ 17,753,510	

*** The state receives a match on premium tax and receives the full tax returned as revenue, so it decreases costs.**
**** Assumes FMAP of 67.3% for Medicaid and 88.61% for CHIP for non-admin components.**
Assumes FMAP of 75% for administration costs and 60% for staff staffing costs to support the pharmacy carve-out model.

Financial Impact to Georgia Under a Carved-out Model
(Scenario B - State where MCOs administer a single state-controlled PDL)

	Total State and Federal Shares		State Share Only**	
Pharmacy Model Comparison (annual cost projections)	**Carve-In Model (Current Model)**	**Carve-Out Model**	**Carve-In Model (Current Model)**	**Carve-Out Model**
Pharmacy Ingredient Cost	$ 441,761,243	$ 387,164,453	$ 133,724,044	$ 117,197,235
Pharmacy Dispensing Fee	$ 9,321,345	$ 99,085,897	$ 2,821,633	$ 29,993,955
Carve-Out Model PDL Impact	$ -	$ 76,520,414	$ -	$ 23,163,234
Subtotal	$ 451,082,588	$ 562,770,765	$ 136,545,677	$ 170,354,425
Medicaid Drug Rebate Program Rebates	$ (175,922,209)	$ (247,336,381)	$ (53,252,814)	$ (74,870,355)
Supplemental Rebates	$ (19,396,551)	$ (19,134,206)	$ (5,871,464)	$ (5,792,050)
Administration Costs	$ 23,303,363	$ 23,303,363	$ 7,054,082	$ 6,874,492
CMO Premium Tax Revenue*	$ -	$ -	$ (7,217,355)	$ -
CMO Underwriting Gain	$ 4,496,730	$ -	$ 1,361,190	$ -
Total Impact	$ 283,563,920	$ 319,603,541	$ 78,619,315	$ 96,566,511
Carve-In Model Annual (Cost)/Savings =	$ 36,039,621		$ 17,947,197	

*** The state receives a match on premium tax and receives the full tax returned as revenue, so it decreases costs.**
**** Assumes FMAP of 67.3% for Medicaid and 88.61% for CHIP for non-admin components.**
Assumes FMAP of 75% for administration costs and 60% for staff staffing costs to support the pharmacy carve-out model.

Appendix C – Michigan

Financial Impact to Michigan Under a Carved-out Model
(Scenario A - State that currently uses a carved-out pharmacy model)

	Total State and Federal Shares			State Share Only**		
Pharmacy Model Comparison (annual cost projections)	**Carve-In Model (Current Model)**	**Carve-Out Model**	**Carve-In Model Annual (Cost)/Savings**	**Carve-In Model (Current Model)**	**Carve-Out Model**	**Carve-In Model Annual (Cost)/Savings**
Pharmacy Ingredient Cost	$ 966,930,637	$ 838,700,687	$ (128,229,949)	$ 237,788,196	$ 206,253,806	$ (31,534,391)
Pharmacy Dispensing Fee	$ 21,347,667	$ 192,129,003	$ 170,781,336	$ 5,249,832	$ 47,248,486	$ 41,998,655
Carve-Out Model PDL Impact	$ -	$ 156,850,218	$ 156,850,218	$ -	$ 38,572,705	$ 38,572,705
Medicaid Drug Rebate Program Rebates	$ (443,767,960)	$ (537,145,982)	$ (93,378,021)	$ (109,131,699)	$ (132,095,281)	$ (22,963,582)
Supplemental Rebates	$ (31,624,906)	$ (47,507,196)	$ (15,882,291)	$ (7,777,217)	$ (11,683,000)	$ (3,905,783)
Administration Costs	$ 53,369,168	$ 53,369,168	$ -	$ 13,124,580	$ 15,743,904	$ 2,619,325
MHP Premium Tax Revenue*	$ -	$ -	$ -	$ (67,123,039)	$ -	$ 67,123,039
MHP Underwriting Gain	$ 13,951,195	$ -	$ (13,951,195)	$ 3,430,887	$ -	$ (3,430,887)
Total Impact	$ 580,205,800	$ 656,395,898	$ 76,190,097	$ 75,561,540	$ 164,040,621	$ 88,479,081
Carve-In Model Annual (Cost)/Savings =			**$ 76,190,097**			**$ 88,479,081**

*** The state receives a match on premium tax and receives the full tax returned as revenue, so it decreases costs.**
**** Assumes FMAP of 64.1% for Medicaid, 90% for Medicaid Expansion, and 86.3% for CHIP for non-admin components.**
Assumes FMAP of 75% for administration costs and 60% for staff staffing costs to support the pharmacy carve-out model.

Financial Impact to Michigan Under a Carved-out Model
(Scenario B - State where MCOs administer a single state-controlled PDL)

	Total State and Federal Shares			State Share Only**		
Pharmacy Model Comparison (annual cost projections)	**Carve-In Model (Current Model)**	**Carve-Out Model**	**Carve-In Model Annual (Cost)/Savings**	**Carve-In Model (Current Model)**	**Carve-Out Model**	**Carve-In Model Annual (Cost)/Savings**
Pharmacy Ingredient Cost	$ 966,930,637	$ 838,700,687	$ (128,229,949)	$ 237,788,196	$ 206,253,806	$ (31,534,391)
Pharmacy Dispensing Fee	$ 21,347,667	$ 192,129,003	$ 170,781,336	$ 5,249,832	$ 47,248,486	$ 41,998,655
Carve-Out Model PDL Impact	$ -	$ 152,621,143	$ 152,621,143	$ -	$ 37,532,688	$ 37,532,688
Medicaid Drug Rebate Program Rebates	$ (443,767,960)	$ (549,655,425)	$ (105,887,464)	$ (109,131,699)	$ (135,171,611)	$ (26,039,912)
Supplemental Rebates	$ (31,624,906)	$ (47,338,033)	$ (15,713,128)	$ (7,777,217)	$ (11,641,399)	$ (3,864,182)
Administration Costs	$ 53,369,168	$ 53,369,168	$ -	$ 13,124,580	$ 15,743,904	$ 2,619,325
MHP Premium Tax Revenue*	$ -	$ -	$ -	$ (67,123,039)	$ -	$ 67,123,039
MHP Underwriting Gain	$ 13,951,195	$ -	$ (13,951,195)	$ 3,430,887	$ -	$ (3,430,887)
Total Impact	$ 580,205,800	$ 639,826,542	$ 59,620,742	$ 75,561,540	$ 159,965,875	$ 84,404,335
Carve-In Model Annual (Cost)/Savings =			**$ 59,620,742**			**$ 84,404,335**

*** The state receives a match on premium tax and receives the full tax returned as revenue, so it decreases costs.**
**** Assumes FMAP of 64.1% for Medicaid, 90% for Medicaid Expansion, and 86.3% for CHIP for non-admin components.**
Assumes FMAP of 75% for administration costs and 60% for staff staffing costs to support the pharmacy carve-out model.

Appendix C – Nevada

Financial Impact to Nevada Under a Carved-out Model
(Scenario A - State that currently uses a carved-out pharmacy model)

	Total State and Federal Shares		State Share Only**	
Pharmacy Model Comparison (annual cost projections)	**Carve-In Model (Current Model)**	**Carve-Out Model**	**Carve-In Model (Current Model)**	**Carve-Out Model**
Pharmacy Ingredient Cost	$ 297,238,585	$ 253,303,144	$ 47,991,369	$ 40,897,667
Pharmacy Dispensing Fee	$ 4,768,401	$ 48,494,638	$ 769,894	$ 7,829,818
Carve-Out Model PDL Impact	$ -	$ 46,406,928	$ -	$ 7,492,742
Medicaid Drug Rebate Program Rebates	$ (121,490,454)	$ (140,179,842)	$ (19,615,533)	$ (22,633,073)
Supplemental Rebates	$ (13,288,307)	$ (5,402,945)	$ (2,145,496)	$ (872,345)
Administration Costs	$ 11,921,002	$ 11,921,002	$ 1,924,734	$ 3,516,696
MCO Premium Tax Revenue*	$ -	$ -	$ (8,903,300)	$ -
MCO Underwriting Gain	$ 4,330,780	$ -	$ 699,237	$ -
Total Impact	$ 183,480,007	$ 214,542,926	$ 20,720,905	$ 36,231,505
Carve-In Model Annual (Cost)/Savings =	$ 31,062,919		$ 15,510,599	

*** The state receives a match on premium tax and recieves the full tax returned as revenue, so it decreases costs.**
**** Assumes FMAP of 63.9% for Medicaid, 90.0% for Medicaid Expansion and 86.3% for CHIP for non-admin components.**
Assumes FMAP of 75% for administration costs and 60% for staff staffing costs to support the pharmacy carve-out model.

Financial Impact to Nevada Under a Carved-out Model
(Scenario B - State where MCOs administer a single state-controlled PDL)

	Total State and Federal Shares		State Share Only**	
Pharmacy Model Comparison (annual cost projections)	**Carve-In Model (Current Model)**	**Carve-Out Model**	**Carve-In Model (Current Model)**	**Carve-Out Model**
Pharmacy Ingredient Cost	$ 297,238,585	$ 253,303,144	$ 47,991,369	$ 40,897,667
Pharmacy Dispensing Fee	$ 4,768,401	$ 48,494,638	$ 769,894	$ 7,829,818
Carve-Out Model PDL Impact	$ -	$ 48,199,707	$ -	$ 7,782,199
Medicaid Drug Rebate Program Rebates	$ (121,490,454)	$ (146,298,462)	$ (19,615,533)	$ (23,620,969)
Supplemental Rebates	$ (13,288,307)	$ (5,430,763)	$ (2,145,496)	$ (876,837)
Administration Costs	$ 11,921,002	$ 11,921,002	$ 1,924,734	$ 3,516,696
MCO Premium Tax Revenue*	$ -	$ -	$ (8,903,300)	$ -
MCO Underwriting Gain	$ 4,330,780	$ -	$ 699,237	$ -
Total Impact	$ 183,480,007	$ 210,189,267	$ 20,720,905	$ 35,528,574
Carve-In Model Annual (Cost)/Savings =	$ 26,709,260		$ 14,807,669	

*** The state receives a match on premium tax and recieves the full tax returned as revenue, so it decreases costs.**
**** Assumes FMAP of 63.9% for Medicaid, 90.0% for Medicaid Expansion and 86.3% for CHIP for non-admin components.**
Assumes FMAP of 75% for administration costs and 60% for staff staffing costs to support the pharmacy carve-out model.

Appendix C – New Jersey

Financial Impact to New Jersey Under a Carved-out Model
(Scenario A - State that currently uses a carved-out pharmacy model)

	Total State and Federal Shares		State Share Only**	
Pharmacy Model Comparison (annual cost projections)	**Carve-In Model (Current Model)**	**Carve-Out Model**	**Carve-In Model (Current Model)**	**Carve-Out Model**
Pharmacy Ingredient Cost	$ 1,444,211,136	$ 1,337,600,884	$ 449,771,137	$ 416,569,472
Pharmacy Dispensing Fee	$ 19,906,904	$ 217,383,392	$ 6,199,613	$ 67,699,779
Carve-Out Model PDL Impact	$ -	$ 229,981,963	$ -	$ 71,623,356
Medicaid Drug Rebate Program Rebates	$ (672,125,158)	$ (824,099,891)	$ (209,320,153)	$ (256,649,693)
Supplemental Rebates	$ (62,225,017)	$ (53,548,987)	$ (19,378,757)	$ (16,676,778)
Administration Costs	$ 49,767,260	$ 49,767,260	$ 15,499,034	$ 14,681,342
CMO Premium Tax Revenue*	$ -	$ -	$ (32,168,399)	$ -
CMO Underwriting Gain	$ 14,603,052	$ -	$ 4,547,833	$ -
Total Impact	$ 794,138,177	$ 957,084,620	$ 215,150,308	$ 297,247,478
Carve-In Model Annual (Cost)/Savings =	$ 162,946,443		$ 82,097,170	

*** The state receives a match on premium tax and receives the full tax returned as revenue, so it decreases costs.**
**** Assumes FMAP of 50% for Medicaid and 76.5% for CHIP for non-admin components.**
Assumes FMAP of 75% for administration costs and 60% for staff staffing costs to support the pharmacy carve-out model.

Financial Impact to New Jersey Under a Carved-out Model
(Scenario B - State where MCOs administer a single state-controlled PDL)

	Total State and Federal Shares		State Share Only**	
Pharmacy Model Comparison (annual cost projections)	**Carve-In Model (Current Model)**	**Carve-Out Model**	**Carve-In Model (Current Model)**	**Carve-Out Model**
Pharmacy Ingredient Cost	$ 1,444,211,136	$ 1,337,600,884	$ 449,771,137	$ 416,569,472
Pharmacy Dispensing Fee	$ 19,906,904	$ 217,383,392	$ 6,199,613	$ 67,699,779
Carve-Out Model PDL Impact	$ -	$ 246,015,943	$ -	$ 76,616,824
Medicaid Drug Rebate Program Rebates	$ (672,125,158)	$ (848,826,283)	$ (209,320,153)	$ (264,350,241)
Supplemental Rebates	$ (62,225,017)	$ (54,030,007)	$ (19,378,757)	$ (16,826,582)
Administration Costs	$ 49,767,260	$ 49,767,260	$ 15,499,034	$ 14,681,342
CMO Premium Tax Revenue*	$ -	$ -	$ (32,168,399)	$ -
CMO Underwriting Gain	$ 14,603,052	$ -	$ 4,547,833	$ -
Total Impact	$ 794,138,177	$ 947,911,190	$ 215,150,308	$ 294,390,594
Carve-In Model Annual (Cost)/Savings =	$ 153,773,013		$ 79,240,286	

*** The state receives a match on premium tax and receives the full tax returned as revenue, so it decreases costs.**
**** Assumes FMAP of 50% for Medicaid and 76.5% for CHIP for non-admin components.**
Assumes FMAP of 75% for administration costs and 60% for staff staffing costs to support the pharmacy carve-out model.

Appendix C – New York

Financial Impact to New York Under a Carved-out Model
(Scenario A - State that currently uses a carved-out pharmacy model)

	Total State and Federal Shares		State Share Only**	
Pharmacy Model Comparison (annual cost projections)	**Carve-In Model (Current Model)**	**Carve-Out Model**	**Carve-In Model (Current Model)**	**Carve-Out Model**
Pharmacy Ingredient Cost	$ 5,065,219,079	$ 4,846,238,100	$ 2,532,609,540	$ 2,423,119,050
Pharmacy Dispensing Fee	$ 65,542,764	$ 660,671,061	$ 32,771,382	$ 330,335,531
Single PDL Adjustment***	$ -	$ 439,802,677	$ -	$ 219,901,338
Medicaid Drug Rebate Program Rebates	$ (2,565,380,922)	$ (2,979,520,441)	$ (1,282,690,461)	$ (1,489,760,220)
Supplemental Rebates	$ (220,407,852)	$ (220,028,338)	$ (110,203,926)	$ (110,014,169)
Administration Costs	$ 163,856,910	$ 163,856,910	$ 81,928,455	$ 48,337,788
MCO Premium Tax Revenue*	$ -	$ -	$ (52,193,389)	$ -
MCO Underwriting Gain	$ 51,149,521	$ -	$ 25,574,760	$ -
Total Impact	$ 2,559,979,501	$ 2,911,019,969	$ 1,227,796,362	$ 1,421,919,318
Carve-In Model Annual (Cost)/Savings =	$ 351,040,468		$ 194,122,956	

Analysis based on calendar year 2018 Medicaid Drug Utilization Data from data.Medicaid.gov
*** The state receives a match on premium tax and receives the full tax returned as revenue, so it decreases costs.**
**** Assumes FMAP of 50.0% for Medicaid for non-admin components.**
Assumes FMAP of 75% for administration costs and 60% for staff staffing costs to support the pharmacy carve-out model.
***** Additional cost due to moving from MCO drug mix to State PDL drug mix.**

Financial Impact to New York Under a Carved-out Model
(Scenario B - State where MCOs administer a single state-controlled PDL)

	Total State and Federal Shares		State Share Only**	
Pharmacy Model Comparison (annual cost projections)	**Carve-In Model (Current Model)**	**Carve-Out Model**	**Carve-In Model (Current Model)**	**Carve-Out Model**
Pharmacy Ingredient Cost	$ 5,065,219,079	$ 4,846,238,100	$ 2,532,609,540	$ 2,423,119,050
Pharmacy Dispensing Fee	$ 65,542,764	$ 660,671,061	$ 32,771,382	$ 330,335,531
Single PDL Adjustment***	$ -	$ 534,136,042	$ -	$ 267,068,021
Medicaid Drug Rebate Program Rebates	$ (2,565,380,922)	$ (2,976,051,067)	$ (1,282,690,461)	$ (1,488,025,533)
Supplemental Rebates	$ (220,407,852)	$ (223,518,672)	$ (110,203,926)	$ (111,759,336)
Administration Costs	$ 163,856,910	$ 163,856,910	$ 81,928,455	$ 48,337,788
MCO Premium Tax Revenue*	$ -	$ -	$ (52,193,389)	$ -
MCO Underwriting Gain	$ 51,149,521	$ -	$ 25,574,760	$ -
Total Impact	$ 2,559,979,501	$ 3,005,332,373	$ 1,227,796,362	$ 1,469,075,520
Carve-In Model Annual (Cost)/Savings =	$ 445,352,872		$ 241,279,158	

Analysis based on calendar year 2018 Medicaid Drug Utilization Data from data.Medicaid.gov
*** The state receives a match on premium tax and receives the full tax returned as revenue, so it decreases costs.**
**** Assumes FMAP of 50.0% for Medicaid for non-admin components.**
Assumes FMAP of 75% for administration costs and 60% for staff staffing costs to support the pharmacy carve-out model.
***** Additional cost due to moving from MCO drug mix to State PDL drug mix.**

Appendix C – South Carolina

Financial Impact to South Carolina Under a Carved-out Model
(Scenario A - State that currently uses a carved-out pharmacy model)

	Total State and Federal Shares		State Share Only**	
Pharmacy Model Comparison (annual cost projections)	**Carve-In Model (Current Model)**	**Carve-Out Model**	**Carve-In Model (Current Model)**	**Carve-Out Model**
Pharmacy Ingredient Cost	$ 521,866,722	$ 570,918,209	$ 113,728,849	$ 124,418,493
Pharmacy Dispensing Fee	$ 5,569,516	$ 16,708,548	$ 1,213,748	$ 3,641,244
Carve-Out Model PDL Impact	$ -	$ 38,840,359	$ -	$ 8,464,363
Medicaid Drug Rebate Program Rebates	$ (203,863,615)	$ (229,642,989)	$ (44,427,386)	$ (50,045,408)
Supplemental Rebates	$ (15,823,087)	$ 30,006,280	$ (3,448,278)	$ 6,539,179
Administration Costs	$ 13,923,790	$ 13,923,790	$ 3,034,370	$ 4,107,518
MCO Premium Tax Revenue*	$ -	$ -	$ -	$ -
MCO Underwriting Gain	$ 5,999,702	$ -	$ 1,307,497	$ -
Total Impact	$ 327,673,028	$ 440,754,197	$ 71,408,800	$ 97,125,388
Carve-In Model Annual (Cost)/Savings =	$ 113,081,169		$ 25,716,588	

*** Generally the state receives a match on premium tax and recieves the full tax returned as revenue, so it decreases costs. There is no premium tax in SC so there is no impact.**

**** Assumes FMAP of 70.7% for Medicaid and 91.0% for CHIP for non-admin components. Assumes FMAP of 75% for administration costs and 60% for staff staffing costs to support the pharmacy carve-out model.**

Financial Impact to South Carolina Under a Carved-out Model
(Scenario B - State where MCOs administer a single state-controlled PDL)

	Total State and Federal Shares		State Share Only**	
Pharmacy Model Comparison (annual cost projections)	**Carve-In Model (Current Model)**	**Carve-Out Model**	**Carve-In Model (Current Model)**	**Carve-Out Model**
Pharmacy Ingredient Cost	$ 521,866,722	$ 570,918,209	$ 113,728,849	$ 124,418,493
Pharmacy Dispensing Fee	$ 5,569,516	$ 16,708,548	$ 1,213,748	$ 3,641,244
Carve-Out Model PDL Impact	$ -	$ 25,707,873	$ -	$ 5,602,440
Medicaid Drug Rebate Program Rebates	$ (203,863,615)	$ (230,098,996)	$ (44,427,386)	$ (50,144,784)
Supplemental Rebates	$ (15,823,087)	$ 29,377,265	$ (3,448,278)	$ 6,402,099
Administration Costs	$ 13,923,790	$ 13,923,790	$ 3,034,370	$ 4,107,518
MCO Premium Tax Revenue*	$ -	$ -	$ -	$ -
MCO Underwriting Gain	$ 5,999,702	$ -	$ 1,307,497	$ -
Total Impact	$ 327,673,028	$ 426,536,689	$ 71,408,800	$ 94,027,009
Carve-In Model Annual (Cost)/Savings =	$ 98,863,661		$ 22,618,209	

*** Generally the state receives a match on premium tax and recieves the full tax returned as revenue, so it decreases costs. There is no premium tax in SC so there is no impact.**

**** Assumes FMAP of 70.7% for Medicaid and 91.0% for CHIP for non-admin components. Assumes FMAP of 75% for administration costs and 60% for staff staffing costs to support the pharmacy carve-out model.**

Appendix D – Estimated Savings by Funding Source (Average of Scenarios A and B)

Estimated Cost Savings: State Share of Medicaid Expenditures

State	Carved-Out Cost (State)	Integrated Pharmacy Savings (State)	
		Dollars	Percentage
Georgia	$96,469,668	$17,850,353	19%
Michigan	$162,003,248	$86,441,708	53%
Nevada	$35,880,039	$15,159,134	42%
New Jersey	$295,819,036	$80,668,728	27%
New York	$1,445,497,419	$217,701,057	15%
South Carolina	$95,576,199	$24,167,399	25%
		Range:	15% to 53%
		Straight Average:	30%

Estimated Cost Savings: Federal Share of Medicaid Expenditures

State	Carved-Out Cost (Federal)	Integrated Pharmacy Savings (Federal)	
		Dollars	Percentage
Georgia	$222,813,947	$17,869,343	8%
Michigan	$486,107,972	($18,536,288)	-4%*
Nevada	$176,486,057	$13,726,955	8%
New Jersey	$656,678,869	$77,691,000	12%
New York	$1,512,678,752	$180,495,613	12%
South Carolina	$338,069,244	$81,805,016	24%
		Range:	-4% to 24%
		Straight Average:	10%

Estimated Cost Savings: Total Medicaid Expenditures (State and Federal Combined)

State	Carved-Out Cost (State & Federal)	Integrated Pharmacy Savings (State & Federal)	
		Dollars	Percentage
Georgia	$319,283,615	$35,719,696	11%
Michigan	$648,111,220	$67,905,420	10%
Nevada	$212,366,097	$28,886,089	14%
New Jersey	$952,497,905	$158,359,728	17%
New York	$2,958,176,171	$398,196,670	13%
South Carolina	$433,645,443	$105,972,415	24%
		Range:	10% to 24%
		Straight Average:	15%

***** The driver for elevated savings in Michigan is the state premium tax, which is significantly higher than in other states and results in Michigan collecting more federal dollars for Medicaid. Federal cost savings are offset by the higher federal premium tax spending.