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HEALTH CARE AND HUMAN SERVICES POLICY, RESEARCH, AND CONSULTING—**WITH REAL-WORLD PERSPECTIVE.**

Potential Federal and State-by-State Savings if Medicaid Pharmacy Programs were Optimally Managed

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Table of Contents

I. Executive Summary

While discussions about Medicaid prescription drug costs have often focused on the rebates received from brand name drug manufacturers, this study explores how more efficient pharmacy benefits management -- apart from rebates -- could save Medicaid an additional $33 billion over the next decade.

Medicaid has become an outlier as one of the nation's few remaining pharmacy benefits programs that is mainly administered by public agencies using a fee-for-service (FFS) delivery model. In this model, which accounts for 73% of Medicaid pharmacy expenditures, dispensing fees, ingredient costs, and benefits management activities are determined by state officials. In most other programs, pharmacy reimbursements are determined through negotiations between pharmacy benefits managers (PBMs) and drug retailers.

Though states often use pharmacy benefits administrators (PBAs) to make their FFS program models operate more efficiently, states do not typically allow such organizations to negotiate payment terms directly with pharmacies. In contrast, Medicare Part D plans, Medicaid managed care organizations (MCOs), and state employee plans typically use PBMs to negotiate dispensing fees and ingredient cost reimbursements. PBMs negotiate directly with chain drug stores and indirectly with independent drug stores through drug wholesalers that collectively negotiate on their behalf.

The experience of Medicaid MCOs indicates that Medicaid pharmacy benefits can be more actively managed without compromising quality or access to medications for the unique and vulnerable populations that Medicaid serves. Likewise, widely varying payment levels—and per member per month (PMPM) costs—among state Medicaid fee-for-service programs serving similar populations suggest that substantial room exists to improve efficiency in most states.

Savings Opportunities Exist In Four Key Areas

While Medicaid FFS programs and costs vary greatly state-by-state, we identified four key areas where pharmacy benefit management could generally be improved:

Generic Drug Dispensing: Medicaid FFS is less effective at encouraging the dispensing of generic drugs in place of brands. The generic dispensing rate in Medicaid FFS averages 68%, compared to an average 80% generic dispensing rate in Medicaid MCOs. While some of this difference is attributable to demographic differences between the Medicaid FFS and MCO populations, much of the generic dispensing difference persists when looking *within* each demographic subgroup.

Dispensing Fees: At $4.81 per prescription, the national average dispensing fee that Medicaid FFS programs pay to retail pharmacies is more than double the average dispensing fees paid by Medicare Part D payers, Medicaid managed care organizations (MCOs), or health plans in the commercial sector.

Ingredient Costs: The rate at which retail pharmacies are reimbursed for the actual medication ingredients (pills, capsules, etc) is also higher, on average, in Medicaid FFS programs than in Medicare Part D or the commercial sector.

Drug Utilization: The number of prescriptions dispensed per person is typically higher for similar demographic subgroups in Medicaid FFS programs than in Medicaid MCOs for similar demographic subgroups due to less effective controls on polypharmacy, fraud, waste, abuse, and other factors in the FFS setting.

States With High Dispensing Fees Also Often Pay High Ingredient Costs

Contrary to conventional wisdom, we did not find that Medicaid FFS programs with low dispensing fees paid high ingredient costs. On the contrary, we found that many state programs paying high dispensing fees often also paid high ingredient costs. Likewise, we found no relationship between pharmacy reimbursement levels and the generic dispensing rate among Medicaid FFS programs, suggesting that benefits management rather than pharmacy reimbursement most strongly influences the generic dispensing rate.

Estimated Federal and State Medicaid Savings

If all state Medicaid programs used a market-based approach such that dispensing fees, ingredient costs, drug utilization, and generic drug dispensing were brought in-line with norms for state employee health plans, Medicare Part D, and Medicaid MCOs, we estimate:

- Medicaid FFS prescription costs could be reduced by approximately 15%
- Combined federal and state savings to the Medicaid program would total $32.7 billion over the next decade
- Per member per month (PMPM) costs for Medicaid FFS pharmacy benefits could be reduced by $12 in 2012 under optimal management

In constructing our model we used data published by the Centers for Medicare and Medicaid Services (CMS) provided by individual state Medicaid programs. Estimated savings vary greatly from state to state and depend on the volume of prescriptions paid for in the FFS setting and how actively each individual Medicaid program currently manages pharmacy benefits (see Exhibit ES-1). Active pharmacy benefit management would incur higher administrative costs, but these costs would not outweigh the substantial savings opportunities and have been accounted for in our estimates. Our model, however, does not estimate specific impacts that would be associated with greater care coordination, clinical specialty pharmacy management, or the use of mail-service pharmacies.

Estimates Reflect Changes Involving AMP and AWP Drug Price Benchmarks

Our savings estimates take into account recent changes to drug price benchmarks that influence pharmacy ingredient cost reimbursement levels in some cases. Recent changes to the determination of Federal Upper Limits (FULs) using the Average Manufacturer Price (AMP) may result in lower pharmacy ingredient cost reimbursement for some generic drugs in some states, so to be conservative we have not assumed that more active pharmacy management would result in any ingredient cost savings for FUL drugs in any state.

Exhibit ES-1. Estimated Savings if Medicaid Pharmacy Programs Were Optimally Managed (Figures represent ten-year timeframe CY2012-CY2021)

State	Federal Share of Net Savings	State Share of Net Savings	10 Year Total Net Savings, 2012-2021
Alabama	$541,589,986	$212,693,864	$754,283,850
Alaska	$123,277,462	$92,518,227	$215,795,688
Arizona	$0	$0	$0
Arkansas	$333,582,219	$97,833,858	$431,416,077
California	$2,664,470,481	$2,102,278,271	$4,766,748,752
Colorado	$145,129,408	$92,104,295	$237,233,703
Connecticut	$195,163,881	$172,490,345	$367,654,226
Delaware	$60,468,563	$57,138,977	$117,607,540
District of Columbia	$51,606,201	$20,541,747	$72,147,948
Florida	$832,251,989	$472,600,872	$1,304,852,861
Georgia	$558,368,644	$265,978,908	$824,347,552
Hawaii	$6,784,074	$3,320,416	$10,104,490
Idaho	$138,704,585	$45,072,321	$183,776,906
Illinois	$804,866,203	$613,459,114	$1,418,325,317
Indiana	$413,221,714	$213,536,536	$626,758,250
Iowa	$265,600,337	$115,936,750	$381,537,087
Kansas	$104,786,220	$62,038,990	$166,825,210
Kentucky	$489,938,125	$173,966,438	$663,904,563
Louisiana	$879,404,642	$280,728,542	$1,160,133,184
Maine	$124,678,825	$60,777,993	$185,456,818
Maryland	$196,475,409	$171,141,358	$367,616,767
Massachusetts	$87,191,071	$87,880,524	$175,071,595
Michigan	$304,054,861	$149,518,302	$453,573,163
Minnesota	$114,704,650	$102,194,619	$216,899,269
Mississippi	$280,410,076	$66,449,179	$346,859,255
Missouri	$559,461,818	$281,744,973	$841,206,791
Montana	$54,131,730	$17,138,337	$71,270,067
Nebraska	$99,486,235	$49,575,402	$149,061,637
Nevada	$58,357,006	$37,057,311	$95,414,317
New Hampshire	$28,623,415	$21,459,624	$50,083,040
New Jersey	$271,482,125	$248,960,390	$520,442,515
New Mexico	$9,922,916	$1,806,984	$11,729,900
New York	$2,289,876,858	$2,271,962,894	$4,561,839,751
North Carolina	$1,338,796,858	$578,706,077	$1,917,502,934
North Dakota	$48,423,763	$19,695,075	$68,118,838
Ohio	$638,373,638	$351,241,692	$989,615,330
Oklahoma	$370,950,440	$154,599,115	$525,549,555
Oregon	$76,014,671	$36,835,822	$112,850,493
Pennsylvania	$224,596,327	$164,502,469	$389,098,796
Rhode Island	$12,701,582	$8,156,214	$20,857,795
South Carolina	$510,973,952	$175,730,508	$686,704,460
South Dakota	$67,541,553	$30,319,022	$97,860,575
Tennessee	$410,240,570	$173,319,372	$583,559,943
Texas	$2,600,124,983	$1,186,927,145	$3,787,052,128
Utah	$107,339,203	$29,932,965	$137,272,168
Vermont	$73,796,325	$50,408,289	$124,204,614
Virginia	$209,806,945	$152,536,246	$362,343,191
Washington	$136,396,587	$112,023,642	$248,420,229
West Virginia	$314,304,332	$94,833,184	$409,137,515
Wisconsin	$267,986,623	$161,999,644	$429,986,267
Wyoming	$35,929,608	$23,774,779	$59,704,387
US TOTAL	**$20,532,369,685**	**$12,167,447,620**	**$32,699,817,305**

Note: Nearly all of Arizona's Medicaid prescriptions are paid for by the managed care organizations (MCOs) contracting with the State. Given the Arizona MCOs' many years of experience managing the pharmacy benefit on a full-risk basis, we assume that further pharmacy benefits management savings are not attainable in this state.

In addition, a 2009 legal settlement resulted in a lowering of the Average Wholesale Price benchmark, which is commonly used in calculating pharmacy ingredient cost reimbursement for brand name drugs. While most commercial sector plans adjusted their ingredient cost formulas to minimize the impact on pharmacies, most Medicaid programs did not. This dynamic has been accounted for in our estimates.

Rebates from Brand Name Manufacturers Have No Impact on Pharmacy Ingredient Cost Reimbursements or Dispensing Fees

The statutory and supplemental rebates paid to Medicaid by brand name manufacturers are determined separately from pharmacy dispensing fees and ingredient costs. This means that manufacturer rebates have no impact on the savings that more active management of dispensing fees and ingredient costs could achieve. Though improved management of drug utilization increases generic drug dispensing (and thereby reduces the use of brand drugs and the related rebate income they generate for states) the net savings to Medicaid FFS programs would still be large, as reflected in our savings estimates.

Conclusion

Over the past decade, many Medicaid FFS programs have placed emphasis on maximizing drug manufacturer rebates while less actively managing other aspects of the pharmacy benefit relative to what occurs in the private sector. If Medicaid pharmacy programs used approaches employed by Medicare Part D, Medicaid MCOs, state employee health plans, and the commercial sector to determine dispensing fees, ingredient costs, drug utilization, and generic drug dispensing, approximately $33 billion in overall savings could be achieved during the next decade.

II. Introduction

States continue to face extreme fiscal pressure to achieve Medicaid savings. Most states have experienced a massive influx of new Medicaid enrollees during the past three years as a result of the recession. While the Federal government has increased its financial support to states during this timeframe, as of July 2011 the enhanced Federal Medicaid match rates will revert to "normal" levels. When it does, states will see their share of Medicaid expenditures increase substantially, while revenues are likely to remain depressed.[1] In addition, the eligibility expansion provisions of the Affordable Care Act (ACA) will result in an enormous influx of new enrollees (more than 16 million persons nationally are projected). Nearly all of the costs for these new enrollees will initially be paid by the Federal government, but states will be strained to take on the added administrative burden of the expansion and pay their share of the costs.

In this environment, state Medicaid programs need to consider all available opportunities to reduce Medicaid costs in a manner that is not detrimental to the impoverished beneficiary population the program serves. Several opportunities exist in the area of pharmacy costs. Over the past several years, Medicaid fee-for-service (FFS) pharmacy programs have expanded their cost management of prescription drugs, but most FFS programs still have not achieved the same level of pharmacy benefits management as found in either Medicare Part D, Medicaid MCOs, or the commercial sector.

Medicaid FFS programs commonly reimburse pharmacies more for dispensing fees and ingredient costs than do MCOs and Part D plans. Additionally, Medicaid MCOs have demonstrated lower utilization and higher generic fill rates than in the Medicaid FFS setting.[2] Medicaid FFS programs could achieve substantial savings if they were to move toward the reimbursement and utilization levels found in Medicaid and commercial MCOs and Medicare Part D plans. Improving management of the FFS pharmacy benefit would likely entail more austere pricing policies as well as stronger management of the Medicaid FFS pharmacy benefit as typically occurs in the private sector. While there would be new costs associated with increasing management functions, the potential savings would more than offset these new administrative costs.

To estimate the potential impact of increased pharmacy benefit management in the Medicaid FFS setting, we modeled the impact of moving Medicaid FFS to levels typically found in Medicaid and commercial MCOs and Part D plans in four key areas: dispensing fees, ingredient cost, generic fill rates, and utilization. Additionally, we calculated an offsetting increase in administrative costs associated with more active benefit management activities. We modeled these changes in a step-wise fashion so that the savings attributable to that step reflect the impact of changes made in prior steps. For example, the savings estimated for improving the generic mix reflect the decrease in dispensing fees and ingredient costs made in prior steps. The estimated share of overall savings attributable to each benefits management component are summarized in Exhibit 1. Nationwide, the largest single component of the estimated savings

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[1] Kaiser Commission on Medicaid and the Uninsured, "Hoping for Economic Recovery, Preparing for Health Reform: A Look at Medicaid Spending, Coverage and Policy Trends," September 2010.

[2] Comparison of Medicaid Pharmacy Costs and Usage Between the Fee-for-Service and Capitated Setting, Lewin Group, 2003 (funded by Center for Health Care Strategies)

(47%) would be derived from greater use of generic medications. Lowering payments to pharmacies for both dispensing fees and ingredient costs would collectively yield 40% of the overall savings (with dispensing fees creating the largest *price* savings opportunity). The remaining 13% of the savings would accrue through reductions in the volume of prescriptions in the FFS setting.

Exhibit 2 conveys state-specific Medicaid baseline information on fee-for-service (FFS) pharmacy costs, pharmacy payment levels, and generic utilization. Exhibit 2 also presents the estimated savings from optimal management of FFS pharmacy benefits. Nationwide FFS pharmacy costs are estimated at $18.3 billion in CY2012 (after rebates are collected[3]). Overall, we estimate that Medicaid could realize a net CY2012 savings of $2.6 billion if FFS prescriptions were optimally managed. Such optimal management is estimated to reduce Medicaid FFS prescription drug costs by approximately 15%.

Exhibit 1. Share of Overall Benefits Management Savings by Component, Across 10-Year Timeframe CY2012-CY2021

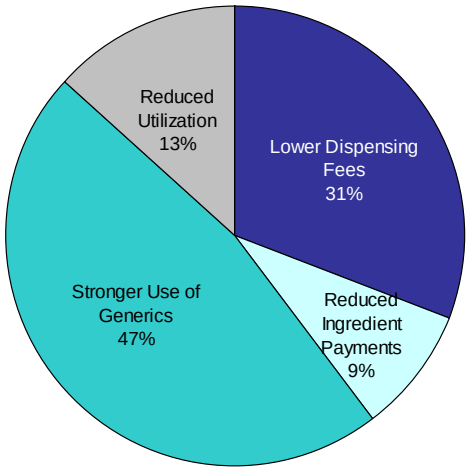

Exhibit 2 presents baseline pharmacy statistics and potential CY2012 savings for each state. States have vastly different baseline FFS pharmacy costs due to the size of their Medicaid programs and the degree to which they use capitation contracting with managed care organizations (MCOs) which includes a pharmacy "carve-in" approach. States also have differing maximum percentage savings opportunities depending on their current dispensing fee and ingredient cost structures, and their existing brand and generic mix of Medicaid medications. The savings figures are expressed in net terms to account for the impacts of Medicaid's large rebates.

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[3] Figures shown in this document generally represent net Medicaid costs and cost savings after rebates are collected. Rebates now represent approximately 40% of initial Medicaid payments to pharmacies. Thus gross pharmacy costs are considerably higher. We have presented only net costs except in the case of per member per month (PMPM) data because PMPM cost statistics are traditionally focused on the initial payments being made to pharmacies.

Exhibit 2. State-Specific Medicaid FFS Pharmacy Expenditures and Savings Opportunities

State	% of Total Rx Costs in FFS Setting	Medicaid FFS Dispensing Fee	Generic Dispensing Rate	% Savings from Optimal Rx Benefits Management	Net Savings from Optimal Rx Benefits Management, 2012
Alabama *	100%	*	72%	18.1%	$60,228,367
Alaska	100%	$7.46	64%	21.7%	$17,636,453
Arizona **	1%	$2.00	0%	0.0%	$0
Arkansas	100%	$5.51	66%	14.2%	$32,750,788
California	76%	$7.25	64%	19.0%	$380,873,331
Colorado	83%	$4.00	69%	9.8%	$16,686,692
Connecticut	100%	$3.15	64%	11.0%	$31,250,369
Delaware	59%	$3.65	67%	12.0%	$10,395,627
District of Columbia	100%	$4.50	67%	17.9%	$6,202,639
Florida	71%	$3.73	67%	12.4%	$99,168,293
Georgia	52%	$4.63	67%	17.4%	$69,037,036
Hawaii	56%	$4.67	79%	12.3%	$691,455
Idaho	100%	$4.94	68%	17.0%	$13,550,994
Illinois	100%	$4.27	73%	13.1%	$111,857,318
Indiana	100%	$4.90	73%	12.2%	$53,960,616
Iowa	100%	$4.57	69%	16.5%	$28,781,116
Kansas	63%	$3.40	67%	10.6%	$14,184,388
Kentucky	80%	$4.87	73%	14.2%	$54,266,177
Louisiana	100%	$5.77	64%	16.0%	$92,372,081
Maine	100%	$3.35	65%	12.9%	$15,725,867
Maryland	41%	$3.31	62%	12.9%	$31,005,971
Massachusetts	56%	$3.00	77%	5.4%	$15,921,464
Michigan	45%	$2.75	67%	10.3%	$36,795,008
Minnesota	46%	$3.65	72%	10.9%	$18,514,773
Mississippi	100%	$4.37	71%	11.3%	$25,387,412
Missouri	76%	$4.09	71%	14.2%	$71,913,520
Montana	100%	$5.04	71%	11.3%	$4,933,241
Nebraska	100%	$3.27	75%	10.7%	$11,386,486
Nevada	76%	$4.76	71%	10.7%	$7,087,982
New Hampshire	100%	$1.75	70%	5.4%	$3,887,877
New Jersey	62%	$3.73	63%	12.5%	$45,104,577
New Mexico	5%	$3.65	70%	8.9%	$571,334
New York	100%	$4.13	63%	15.1%	$411,615,383
North Carolina	100%	$5.05	65%	19.0%	$150,337,202
North Dakota	100%	$5.29	69%	19.7%	$4,921,642
Ohio	39%	$3.70	71%	9.6%	$86,980,666
Oklahoma	100%	$4.15	70%	11.2%	$42,566,846
Oregon *	43%	*	71%	8.3%	$8,955,460
Pennsylvania	24%	$4.00	70%	10.4%	$32,975,428
Rhode Island	46%	$3.40	71%	19.6%	$1,559,716
South Carolina	85%	$4.05	65%	17.2%	$53,634,426
South Dakota	100%	$4.75	68%	18.1%	$7,367,152
Tennessee	100%	$2.74	47%	10.2%	$45,600,589
Texas	100%	$7.50	69%	19.0%	$272,613,603
Utah	100%	$3.90	73%	9.7%	$9,574,517
Vermont	100%	$4.75	64%	16.0%	$11,260,858
Virginia	49%	$3.75	73%	14.5%	$27,635,251
Washington	66%	$4.75	76%	8.4%	$20,931,842
West Virginia	100%	$4.38	67%	14.2%	$33,361,338
Wisconsin	58%	$3.76	65%	13.6%	$36,880,813
Wyoming	100%	$5.00	69%	16.5%	$4,307,317
US Total	**73%**	**$4.81**	**68%**	**14.5%**	$2,645,209,301

* Alabama and Oregon recently adopted a payment model whereby pharmacies are paid at their average acquisition cost plus a dispensing fee of more than $10.00. To the extent these initiatives lower net prices, less savings will be achievable in these two states than the figures indicated in the right-hand column. Roughly 65% of Alabama's total potential savings and 30% of Oregon's were projected to occur through reductions in the unit prices paid to pharmacies.

** Since nearly all of Arizona's Medicaid prescriptions are paid for by the MCOs with which the State contracts, we assume that further pharmacy benefits management savings are not attainable in this state.

III. Savings Estimate Derivation

The starting point for our analyses involved drawing upon publicly available CMS Medicaid pharmacy data on FFS expenditures for brand and generic medications in each state.[4] The most recent year's FFS costs (2009 for nearly all states) were trended to CY2011. These baseline costs and usage figures are shown in detail in Appendix A. These figures exclude Medicaid prescriptions purchased by Medicaid MCOs, and represent the amounts paid to pharmacies prior to the receipt of rebates from drug manufacturers.

The assumptions used to estimate the savings from each pharmacy cost management technique are described below, along with an overview of how these assumptions were derived.

A. Reduced Dispensing Fees

On average, Medicaid FFS programs pay pharmacies a dispensing fee of $4.60 for brand drugs and $4.90 for generic drugs, more than twice the amount paid by private sector health plans. For states with Medicaid FFS dispensing fees above average Medicare Part D dispensing fees, we assumed that under PBM management the Medicaid dispensing fees will decrease to the typical Medicare Part D levels (estimated at $1.90 for brand drugs and $2.20 for generic drugs).[5]

B. Reduced Ingredient Costs

The rate at which retail pharmacies are reimbursed for the actual medication ingredients (pills, capsules, etc) is also higher, on average, in Medicaid FFS programs than in Medicare Part D or the commercial sector. The ingredient cost reimbursement amount is computed based on either a published price benchmark, such as Average Wholesale Price (AWP), or on a fixed price per unit, such as a Maximum Allowable Cost (MAC). Pharmacies earn revenue on the difference or "spread" between their acquisition cost and ingredient cost reimbursement amount. This revenue source is often greater than revenues from dispensing fees.

Many Medicaid FFS programs pay higher ingredient costs to pharmacies for brand and generic drugs than do other programs.[6] Our model projects that if Medicaid FFS programs more actively managed their pharmacy benefits, ingredient costs would go down due to the negotiated pharmacy price reductions for both brand and generic drugs.

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4 Available Online: http://www.cms.gov/MedicaidDrugRebateProgram/SDUD/list.asp. Data for Indiana, Ohio, Tennessee and Wisconsin were derived from a separate source (CMS MSIS website data) given that the baseline FFS costs in the first source were found to be incomplete for purposes of future trending – often due to a recent adoption of a pharmacy carve-out model within the state's Medicaid managed care program.

5 "Memorandum Report: Medicare Part D Pharmacy Discounts for 2008, OEI-02-10-00120," DHHS Office of the Inspector General, November 2010.

6 "Comparing Pharmacy Reimbursement: Medicare Part D to Medicaid," DHHS Office of the Inspector General, February 2009; "Comparing Pharmacy Reimbursement: Medicare Part D to Medicaid," DHHS Office of the Inspector General, February 2009; CMS Medicaid Pharmacy Reimbursement Information, Available Online: <http://www.cms.gov/Reimbursement/>, Accessed July 2010.

For brand drugs, we estimated that the AWP "discount rates" (the payment amounts negotiated below full AWP pricing levels) for some states will increase to reflect brand discount rates for Medicare Part D and commercial MCO plans. While prior data have shown Part D and commercial plans reimburse approximately 16% off of AWP, the recent reductions made in the calculation of AWP has changed the current discount rates.[7] Many Part D and commercial plans did not alter their reimbursement rates in lock-step with the AWP reductions, so the discount rate has decreased for many plans. Lewin's analysis of proprietary Part D data found average discount rates of approximately 13% off of AWP, which we used for our benchmark. For states with a brand AWP discount rate below 13%, we brought them up to 13%; we did not make any changes to the brand discount if a state's current brand AWP discount is higher than 13%.

Most Medicaid FFS programs have multiple pricing points for generic drugs and generally choose the lower of: 1) Federal Upper Limit (FUL) amount, 2) State Maximum Allowable Charge (MAC), 3) discount off of AWP, 4) usual and customary charges. Several OIG reports have shown Medicaid reimbursement for generic drugs to be well above that of Part D and commercial plans.[8] For generic drugs on the FUL list, the OIG reported that states paid in aggregate an estimated 84% more than Part D. However, the recent change in the FUL calculation to be no less than 175% of AMP will likely bring these drugs closer to those of other payers.[9] As the new FULs will likely bring generic ingredient cost down on several drugs, we have not assumed any additional savings would occur for drugs on the FUL list as reimbursement for several of these drugs will be reduced regardless of a state's actions. Approximately 53% of Medicaid FFS generic drug expenditures were for drugs on the FUL.[10]

For drugs not on the FUL list, there would still be opportunities to bring Medicaid generic ingredient costs in line with other payers. The OIG's analysis on a selection of top generic drugs found that the average Medicaid pharmacy reimbursement amount exceeded Part D by at least 10% for the majority of drugs in their sample, with the median being 17% higher than Part D. Using this information, we took a conservative approach and estimated that states could reduce generic ingredient costs up to 10% for generic drugs not on the FUL list. We used the states' published AWP discounts for generic drugs as a proxy to indicate their current aggressiveness

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7 "2009-2010 Prescription Drug Benefit Cost and Plan Design Report," Pharmacy Benefit Management Institute and Lewin analysis of proprietary Part D data.

8 "Comparing Pharmacy Reimbursement: Medicare Part D to Medicaid," DHHS Office of the Inspector General, February 2009; "A Comparison of Medicaid Federal Upper Limit Amounts to Acquisition Costs, Medicare Payment Amounts, and Retail Prices," DHHS Office of the Inspector General, August 2009

9 The OIG found that the AMP-based FUL amounts for ingredient costs under the DRA-mandated method (never implemented due to an injunction) were slightly less than average Part D payments. With the new definition of AMP and formula for determining FULs projected to increase FULs over the DRA amounts, it is likely that the new FULs will be at or above average Part D payments.

10 Coster, John, "Trends in Generic Drug Reimbursement in Medicaid and Medicare", *US Pharmacist*, 2010; 35(6)(Generic Drug Review suppl):14-19; US Government Accountability Office, "Medicaid Outpatient Prescription Drugs: Second Quarter 2008 Federal Upper Limits for Reimbursement Compared with Average Retail Pharmacy Acquisition Costs," GAO-10-118R Medicaid Federal Upper Limit, November 30, 2009.

on generic pricing.[11] We applied up to a 10 percentage point increase on generic AWP discount rates, on a sliding-scale basis, to the state's current level of generic drug reimbursement. We estimated a greater increase in generic discount for states currently with lower generic discount rates. For example, a state with a 5% generic AWP discount rate would move to 15%; a state with a 50% generic AWP discount rate would move only slightly to 51%. We applied these savings only to the estimated generic drug ingredient costs on drugs not on the FUL list (on average, 47% of the generic drug ingredient costs).[12]

C. Increased Generic Dispensing Rate

Medicaid MCOs have consistently demonstrated a generic dispensing rate several percentage points above that achieved directly by Medicaid FFS programs for the Temporary Assistance for Needy Families (TANF) and Supplemental Security Income (SSI) populations.[13], [14] While generic dispensing rates have been several percentage points higher for TANF subgroups than for SSI subgroups due to the different mix of medications used, all available data indicates that MCOs have used more generics than the FFS setting for *both* subgroups.

MCOs tend to have more restrictive PDLs and enforce them more diligently. Most state FFS programs have preferred drug lists but their content is politically changeable and it is generally easier to get the non-PDL medications prescribed in FFS than in the MCO setting. MCOs are better able to remain focused on clinical and cost dynamics with regard to their PDL content and exception processes.

We modeled the savings on a sliding scale in each state. Each state was moved from its observed baseline generic dispensing rate to a target of 70-80%. States with lower generic fill rates were assumed to make greater improvements. For example, a state with a generic dispensing rate of 65% was shifted to 70%; a state with a 70% generic dispensing rate was shifted to 73%.

D. Decreased Utilization

Medicaid MCOs have additionally demonstrated a lower prescription utilization rate than Medicaid FFS programs with similar demographic subgroups.[15] There are several causes for unnecessary and inappropriate prescription usage including fraud, prescription drug abuse,

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[11] CMS Medicaid Pharmacy Reimbursement Information, Available Online: <http://www.cms.gov/Reimbursement/>, Accessed July 2010.

[12] US Government Accountability Office, "Medicaid Outpatient Prescription Drugs: Second Quarter 2008 Federal Upper Limits for Reimbursement Compared with Average Retail Pharmacy Acquisition Costs," GAO-10-118R Medicaid Federal Upper Limit, November 30, 2009. We used the 53% reported in the US Pharmacist article and state-level information on FUL drugs from the GAO report to estimate state-level ingredient costs for non-FUL drugs.

[13] Programmatic Assessment of Carve-In and Carve-Out Arrangements for Medicaid Prescription Drugs, The Lewin Group, 2007 (funded by Association for Community Affiliated Plans)

[14] Comparison of Medicaid Pharmacy Costs and Usage Between the Fee-for-Service and Capitated Setting, The Lewin Group, 2003 (funded by Center for Health Care Strategies), page 7.

[15] Programmatic Assessment of Carve-In and Carve-Out Arrangements for Medicaid Prescription Drugs, Lewin Group, 2007 (funded by Association for Community Affiliated Plans)

inefficient prescribing, and other factors. Collectively these problem areas seem to be more pronounced in the Medicaid FFS setting than in a more closely managed environment. While we have evidence of rather large-scale usage rate differentials between the Medicaid FFS and Medicaid managed care settings, we have conservatively assumed a 3% decrease in utilization from PBM management practices (relative to FFS) for this report.

E. Increased Administrative Costs

These changes in reimbursement and utilization management will require an increase in administrative functions and oversight. We assumed that payments to external contractors (or increased operating costs if the state "self-performs" the enhanced pharmacy management functions) would represent 3%of gross pharmacy costs.

IV. Ten-Year Savings Estimates

Savings estimates were initially derived for calendar year 2010. These figures were then projected forward across a ten-year timeframe CY2012 – CY2021 using the following assumptions.

An annual pharmacy cost trend factor of 2.18% was used to estimate the regular growth of annual Medicaid FFS spending. This percentage is a "roll-up" of additional assumptions regarding population growth and general inflation in pharmacy costs and usage. The trend factor also includes an assumption that the use of capitated MCOs will steadily increase in the Medicaid program (which reduces the amount of FFS pharmacy spending that is available for enhanced management).

The ten-year projections also factor in expected Medicaid enrollment growth created by the coverage expansion features of the Affordable Care Act (ACA). The increased FFS pharmacy costs anticipated to accompany the ACA's Medicaid coverage expansion were derived through the following steps:

- Lewin Group estimates of the size of the Medicaid expansion population in each state were drawn upon as a starting point.
- Total pharmacy costs for each expansion enrollee were estimated based on observed pharmacy costs for selected covered adults in Tennessee. This state already provides coverage to a large population of adults that is demographically similar to the Medicaid expansion population that will enroll in most other states.
- FFS pharmacy costs were derived based on the degree to which Medicaid TANF costs in each state were paid via capitation or via FFS during 2008.
- The Medicaid expansion population was estimated to enroll 50% in the initial year (CY2014) and to be fully enrolled from CY2015 onward.

Exhibit 3 presents the net savings estimates across the 10 year timeframe 2012-2021. These net savings are estimated to be $32.7 billion across CY2012 – CY2021, with nationwide annual savings starting at $2.6 billion in CY2012 and reaching $3.7 billion in CY2021.

Exhibit 3.
Nationwide Annual Savings if Medicaid Pharmacy Were Optimally Managed, 2012-2021

Calendar Year	Total Savings
2012	$2,645,209,301
2013	$2,702,821,959
2014	$2,976,671,958
2015	$3,261,168,728
2016	$3,332,196,983
2017	$3,404,772,233
2018	$3,478,928,173
2019	$3,554,699,228
2020	$3,632,120,577
2021	$3,711,228,164
10 Year Total, 2012-2021	$32,699,817,305

Note: Figures from CY2014 forward include the estimated impacts of Medicaid enrollment expansion related to the recently enacted health reform legislation.

On average, we estimate that a savings of approximately 15% is achievable if Medicaid pharmacy programs used approaches employed by Medicare Part D payers, Medicare MCOs, state employee health plans, and the commercial sector to determine dispensing fees, ingredient costs, drug utilization, and generic drug dispensing.

V. The Role of Manufacturer Rebates

It is important to note that Medicaid receives statutory rebates from pharmaceutical manufacturers that substantially lower the program's net costs per prescription. However, these rebates are determined separately from pharmacy dispensing fees and ingredient costs, and occur regardless of levels set for these pharmacy payments. Rebates do not diminish or otherwise impact the savings that are achieved from dispensing fee savings and ingredient cost reductions.

Improved management of *drug mix* – pushing utilization towards medications that are clinically appropriate but which offer Medicaid the lowest net cost – often represents the largest-scale savings opportunity for states. However, since rebates are often largest (in percentage and raw dollar terms) on relatively high-cost medications, the savings created by moving usage from a $100 brand drug to a $30 generic drug needs to be derived net of rebates. (There are some instances where the brand rebate is so large that the lowest net cost involves using the brand medication, for example.) The estimates in this document are therefore all conveyed on a net cost basis, after accounting for rebates. In general, pharmaceutical rebates are estimated to average 40% of initial prescription drug spending under the Affordable Care Act's (ACA) enhanced rebate provisions, and this level of rebates has been applied to the utilization reduction savings component in our calculations.

VI. Relationship Between Dispensing Fees, Ingredient Costs and Generic Dispensing Rates

We found a positive correlation between dispensing fees and ingredient costs, with states having relatively high dispensing fees also having fairly low average ingredient discounts.

Thus, several states were high-end payers to retail pharmacies for both dispensing fees and ingredient costs.

Lewin examined the state-by-state statistical data to assess:

- whether dispensing fees and ingredient payments appeared to be correlated in some fashion; and
- whether states with relatively high dispensing fees (and relatively high ingredient payments for generics) were achieving a relatively high use of generic medications.

We found no evidence of such a correlation in either case, although with regard to the first issue there are many states with high payment levels for *both* dispensing fees and ingredient costs.

Exhibit 4 shows that the average usage of generics was almost constant when states were grouped by their different dispensing fees. Similarly, Exhibit 5 shows that the use of generics did not vary when states were grouped by their published ingredient discount levels.

Exhibit 4. Relationship of Dispensing Fees to Generic Dispensing Rates

Dispensing Fee Range	Number of States	Average Generic Dispensing Rate	Average Ingredient Discount
$5.00 +	10	67.3%	12.3%
$3.50 - $4.99	30	69.5%	14.1%
< $3.50	10	66.4%	14.7%
Total	**50**	**68.5%**	**13.8%**

Exhibit 5. Relationship of Ingredient Discounts to Generic Dispensing Rates

Ingredient Discount Range	Number of States	Average Generic Dispensing Rate	Average Dispensing Fee
16% +	10	68.5%	$4.14
12% - 15.9%	27	68.0%	$4.17
< 12%	13	69.4%	$4.76
Total	**50**	**68.5%**	**$4.81**

Appendix B presents a scatter plot showing each state's generic dispensing rate, its dispensing fee, and its ingredient discount percentage relative to AWP. This diagram visually shows the absence of any correlation between making higher up-front payments to pharmacies and achieving a relatively high use of generics in return.

We also assessed whether there was greater use of generics in states that utilized a higher dispensing fee for generics than they used for brand drugs. Again, no correlation was found. Among the nine states that paid a higher dispensing fee for generic drugs than for brands, the average generic dispensing rate was 65% versus 69% in all states where the same dispensing fee was used for both brand and generics.

VII. State-Specific Savings Estimates by Eligibility Category

This section calculates state-specific savings by major eligibility category. Per member per month (PMPM) savings have been derived for each of the following eligibility groups (all of which exclude Medicare/Medicaid dual eligibles given that these individuals' pharmacy costs are paid for by the Medicare program):

Blind/Disabled

Children (non-disabled)

Adults (non-disabled)

Foster Children

The PMPM analyses portray baseline (gross) costs and cost savings, since PMPM pharmacy cost assessments are typically conducted focusing on the initial amounts paid to the pharmacies, not the state's net prescription drug expenditures after accounting for manufacturer rebates. Baseline FFS pharmacy costs by state and eligibility category are shown in Exhibit 6 for CY2012. Nationwide, the majority (62%) of Medicaid FFS pharmacy costs are incurred by the Blind/Disabled subgroup. This is due to two factors: first, the Blind/Disabled subgroup experiences very high per capita pharmacy costs; second the TANF population is enrolled in Medicaid MCOs more fully than is the Blind/Disabled population in many states.

Baseline PMPM FFS costs are shown for CY2012 in Exhibit 7. PMPM pharmacy costs for each eligibility subgroup vary considerably – national averages are $273 for the Blind/Disabled, $28 for TANF Children, $55 for TANF Adults, and $82 for Foster Care Children.

Estimated potential PMPM savings against the FFS baseline are shown in Exhibit 8 for each state for CY2012. The PMPM savings average $41 for the Blind/Disabled subgroup, $4 for TANF Children, $8 for TANF Adults, and $12 for Foster Care Children.

Exhibit 6. Estimated Baseline Medicaid FFS Pharmacy Costs by Eligibility Category, CY2012

State	Estimated 2012 Total $				
	Blind/Disabled	Children	Adults	Foster Care Children	Total
Alabama	$352,946,008	$156,216,033	$33,853,812	$10,674,196	$553,690,050
Alaska	$75,808,071	$27,262,779	$27,769,747	$4,606,543	$135,447,139
Arizona	$0	$0	$0	$0	$0
Arkansas	$211,023,428	$139,366,127	$24,006,517	$9,146,853	$383,542,925
California	$2,492,361,695	$271,502,655	$467,606,414	$107,026,027	$3,338,496,790
Colorado	$162,384,429	$56,815,195	$40,808,804	$23,548,637	$283,557,065
Connecticut	$271,287,105	$92,396,083	$103,754,536	$8,112,613	$475,550,337
Delaware	$50,901,576	$22,766,427	$68,368,696	$2,830,038	$144,866,737
District of Columbia	$48,042,649	$353,646	$7,624,843	$1,726,970	$57,748,108
Florida	$910,997,340	$238,149,738	$142,314,827	$41,302,576	$1,332,764,480
Georgia	$578,414,836	$23,910,583	$14,004,592	$46,009,822	$662,339,833
Hawaii	$9,054,924	$92,139	$239,040	$9,651	$9,395,754
Idaho	$88,102,893	$26,934,324	$14,993,144	$3,006,044	$133,036,403
Illinois	$704,512,657	$377,574,143	$271,414,720	$69,260,783	$1,422,762,303
Indiana	$365,910,971	$196,105,095	$140,967,834	$35,972,782	$738,956,682
Iowa	$154,467,875	$72,465,965	$48,138,386	$16,214,077	$291,286,303
Kansas	$171,669,588	$15,480,390	$5,100,154	$31,182,930	$223,433,061
Kentucky	$408,219,118	$134,911,322	$77,814,634	$16,548,255	$637,493,328
Louisiana	$498,089,955	$346,888,378	$99,354,138	$18,766,169	$963,098,640
Maine	$91,097,033	$33,444,496	$72,911,351	$5,804,369	$203,257,249
Maryland	$266,559,163	$72,803,099	$30,536,298	$29,314,741	$399,213,302
Massachusetts	$330,373,003	$56,544,682	$108,163,022	$580,771	$495,661,477
Michigan	$357,634,716	$116,095,976	$83,588,387	$38,621,605	$595,940,684
Minnesota	$224,837,769	$22,866,595	$24,662,246	$9,710,286	$282,076,897
Mississippi	$217,857,468	$115,855,934	$36,171,688	$5,331,016	$375,216,107
Missouri	$611,868,174	$145,058,255	$57,482,585	$30,807,353	$845,216,367
Montana	$45,050,930	$12,372,737	$11,696,505	$3,732,542	$72,852,714
Nebraska	$73,773,337	$61,940,568	$23,126,396	$19,129,523	$177,969,823
Nevada	$88,382,863	$6,115,766	$6,493,859	$9,710,235	$110,702,722
New Hampshire	$53,814,127	$42,530,899	$18,303,176	$4,961,969	$119,610,172
New Jersey	$552,433,118	$12,811,404	$15,184,285	$20,597,905	$601,026,711
New Mexico	$6,348,285	$1,830,390	$2,534,651	$43,050	$10,756,376
New York	$2,478,591,458	$605,270,130	$1,419,762,584	$44,825,693	$4,548,449,865
North Carolina	$704,869,682	$355,481,160	$227,512,460	$31,073,453	$1,318,936,756
North Dakota	$21,001,803	$10,005,740	$8,632,371	$1,981,745	$41,621,659
Ohio	$1,175,454,416	$100,113,434	$78,959,631	$148,278,626	$1,502,806,106
Oklahoma	$336,285,436	$221,871,326	$59,838,923	$16,683,603	$634,679,288
Oregon	$120,052,556	$11,697,511	$37,442,690	$10,537,137	$179,729,893
Pennsylvania	$372,484,854	$67,699,028	$64,627,323	$23,787,174	$528,598,379
Rhode Island	$12,695,423	$118,789	$208,755	$206,244	$13,229,211
South Carolina	$262,238,434	$151,800,163	$90,474,866	$14,771,278	$519,284,741
South Dakota	$31,251,196	$21,326,908	$10,044,955	$5,243,821	$67,866,880
Tennessee	$371,736,632	$206,949,104	$148,672,553	$17,645,138	$745,003,427
Texas	$1,229,112,328	$893,207,566	$156,726,698	$113,285,749	$2,392,332,340
Utah	$87,931,736	$27,096,665	$39,731,253	$9,947,870	$164,707,525
Vermont	$39,906,122	$18,592,361	$54,523,041	$4,235,857	$117,257,381
Virginia	$201,061,918	$51,873,577	$25,933,145	$38,605,185	$317,473,825
Washington	$361,256,748	$18,903,373	$22,038,157	$12,857,089	$415,055,366
West Virginia	$272,844,798	$67,549,704	$42,225,444	$9,466,536	$392,086,481
Wisconsin	$272,234,260	$53,214,936	$107,424,163	$20,426,794	$453,300,153
Wyoming	$20,845,569	$13,368,384	$5,800,239	$3,383,030	$43,397,222
US Total	**$18,846,080,471**	**$5,795,601,681**	**$4,679,568,535**	**$1,151,532,353**	**$30,472,783,039**

Note: Figures in Exhibits 6-8 represent gross (pre-rebate) payments to pharmacies.
Savings estimates derived throughout this report, conversely, are net of all collected rebates.

Exhibit 7. Estimated Baseline PMPM Medicaid FFS Pharmacy Costs by Eligibility Category, CY2012

State	2012 Base PMPM				
	Blind /Disabled	Children	Adults	Foster Care Children	Total
Alabama	$256	$51	$57	$97	$107
Alaska	$442	$24	$78	$71	$77
Arizona	$0	$0	$0	$0	$0
Arkansas	$223	$28	$57	$109	$60
California	$304	$27	$57	$55	$118
Colorado	$314	$24	$55	$176	$75
Connecticut	$546	$29	$82	$85	$94
Delaware	$301	$25	$88	$96	$77
District of Columbia	$297	$27	$63	$58	$178
Florida	$283	$24	$38	$70	$76
Georgia	$228	$27	$57	$82	$157
Hawaii	$475	$28	$57	$94	$352
Idaho	$310	$19	$70	$73	$67
Illinois	$271	$19	$44	$73	$48
Indiana	$302	$27	$57	$92	$161
Iowa	$309	$27	$34	$103	$62
Kansas	$321	$21	$38	$167	$141
Kentucky	$261	$38	$77	$95	$101
Louisiana	$284	$39	$50	$124	$75
Maine	$296	$26	$73	$108	$77
Maryland	$257	$26	$43	$112	$82
Massachusetts	$109	$25	$53	$115	$67
Michigan	$313	$24	$51	$78	$74
Minnesota	$311	$23	$53	$84	$124
Mississippi	$178	$29	$57	$75	$63
Missouri	$430	$47	$65	$86	$147
Montana	$333	$23	$78	$77	$84
Nebraska	$368	$37	$68	$115	$75
Nevada	$303	$27	$57	$85	$149
New Hampshire	$325	$32	$79	$111	$68
New Jersey	$510	$27	$36	$63	$261
New Mexico	$46	$27	$57	$12	$42
New York	$377	$24	$63	$57	$82
North Carolina	$315	$32	$71	$111	$78
North Dakota	$317	$26	$62	$74	$67
Ohio	$196	$27	$57	$83	$117
Oklahoma	$289	$28	$37	$68	$58
Oregon	$343	$27	$103	$75	$140
Pennsylvania	$216	$38	$70	$76	$111
Rhode Island	$206	$27	$57	$17	$162
South Carolina	$229	$29	$42	$69	$59
South Dakota	$253	$23	$51	$88	$52
Tennessee	$183	$26	$52	$84	$58
Texas	$262	$32	$36	$132	$64
Utah	$361	$28	$61	$94	$83
Vermont	$312	$26	$93	$120	$80
Virginia	$196	$27	$45	$153	$85
Washington	$305	$27	$30	$55	$145
West Virginia	$302	$33	$97	$96	$113
Wisconsin	$133	$27	$39	$41	$62
Wyoming	$299	$26	$60	$84	$60
US Total	**$273**	**$28**	**$55**	**$82**	**$83**

Exhibit 8. Estimated PMPM Pharmacy Benefit Management Savings Against Baseline Medicaid FFS Pharmacy Costs, by State and Eligibility Category, CY2012

State	2012 Base PMPM Savings				
	Blind/Disabled	Children	Adults	Foster Care Children	Total
Alabama	$39	$8	$9	$15	$16
Alaska	$75	$4	$13	$12	$13
Arizona					
Arkansas	$32	$4	$8	$16	$9
California	$57	$5	$11	$10	$22
Colorado	$36	$3	$6	$20	$9
Connecticut	$75	$4	$11	$12	$13
Delaware	$41	$3	$12	$13	$11
District of Columbia	$50	$5	$11	$10	$30
Florida	$42	$4	$6	$10	$11
Georgia	$39	$5	$10	$14	$27
Hawaii	$48	$3	$6	$9	$36
Idaho	$53	$3	$12	$12	$11
Illinois	$35	$2	$6	$9	$6
Indiana	$39	$4	$7	$12	$21
Iowa	$51	$5	$6	$17	$10
Kansas	$42	$3	$5	$22	$18
Kentucky	$35	$5	$10	$13	$14
Louisiana	$46	$6	$8	$20	$12
Maine	$45	$4	$11	$16	$12
Maryland	$38	$4	$6	$16	$12
Massachusetts	$6	$1	$3	$7	$4
Michigan	$41	$3	$7	$10	$10
Minnesota	$36	$3	$6	$10	$14
Mississippi	$20	$3	$6	$8	$7
Missouri	$56	$6	$8	$11	$19
Montana	$37	$3	$9	$9	$9
Nebraska	$38	$4	$7	$12	$8
Nevada	$34	$3	$6	$10	$17
New Hampshire	$26	$3	$6	$9	$5
New Jersey	$75	$4	$5	$9	$38
New Mexico	$5	$3	$6	$1	$4
New York	$65	$4	$11	$10	$14
North Carolina	$55	$6	$12	$19	$14
North Dakota	$56	$4	$11	$13	$12
Ohio	$22	$3	$6	$9	$13
Oklahoma	$35	$3	$5	$8	$7
Oregon	$34	$3	$10	$7	$14
Pennsylvania	$24	$4	$8	$9	$13
Rhode Island	$35	$5	$10	$3	$27
South Carolina	$40	$5	$7	$12	$10
South Dakota	$44	$4	$9	$15	$9
Tennessee	$23	$3	$7	$11	$7
Texas	$45	$6	$6	$23	$11
Utah	$38	$3	$6	$10	$9
Vermont	$54	$5	$16	$21	$14
Virginia	$27	$4	$6	$21	$11
Washington	$24	$2	$2	$4	$11
West Virginia	$46	$5	$15	$15	$17
Wisconsin	$20	$4	$6	$6	$9
Wyoming	$47	$4	$9	$13	$9
US Total	**$41**	**$4**	**$8**	**$12**	**$12**

VIII. Federal and State Share of Savings

This section portrays the degree to which net savings on prescription drugs (after manufacturer rebates are taken into account) will accrue to each state government versus the Federal government. The share of overall savings between state and the Federal governments is driven by Federal matching rates. We have assumed the Federal match rates will revert to "normal" levels during the 2012-2021 timeframe, given that under current law the enhanced Federal match rates will be discontinued effective July CY2011.

Due to the Affordable Care Act (ACA), the Medicaid expansion population will be funded almost entirely by the Federal government. Therefore, we assumed the pharmacy savings attributable to the Medicaid expansion population during 2014-2021 will be 100% Federal savings.

There are also some complexities between the Federal and state match regarding "clawback" provisions of the ACA related to drug manufacturer rebates. These dynamics have not been factored into our estimates and will have only a minor impact on the share of the savings yielded from enhanced pharmacy benefits management activities.

The estimated ten-year savings in each state, and the Federal and state share of those savings, is presented in Exhibit 9. The Federal government would realize the majority of the savings (62% on average nationwide), since its matching rate is at least 50% in each state. State fund savings from strengthened Medicaid FFS pharmacy benefits management practices would nonetheless be very large in magnitude, particularly in consideration of the fiscal environment confronting nearly all state governments. The ten-year state fund savings potential exceeds $2 billion in California and New York, exceeds $1 billion in Texas, and exceeds $100 million in 22 other states.

Exhibit 9. Estimated Ten-Year Pharmacy Benefits Management Savings Against Baseline Medicaid FFS Costs, Showing State and Federal Share of Savings, CY2012-CY2021

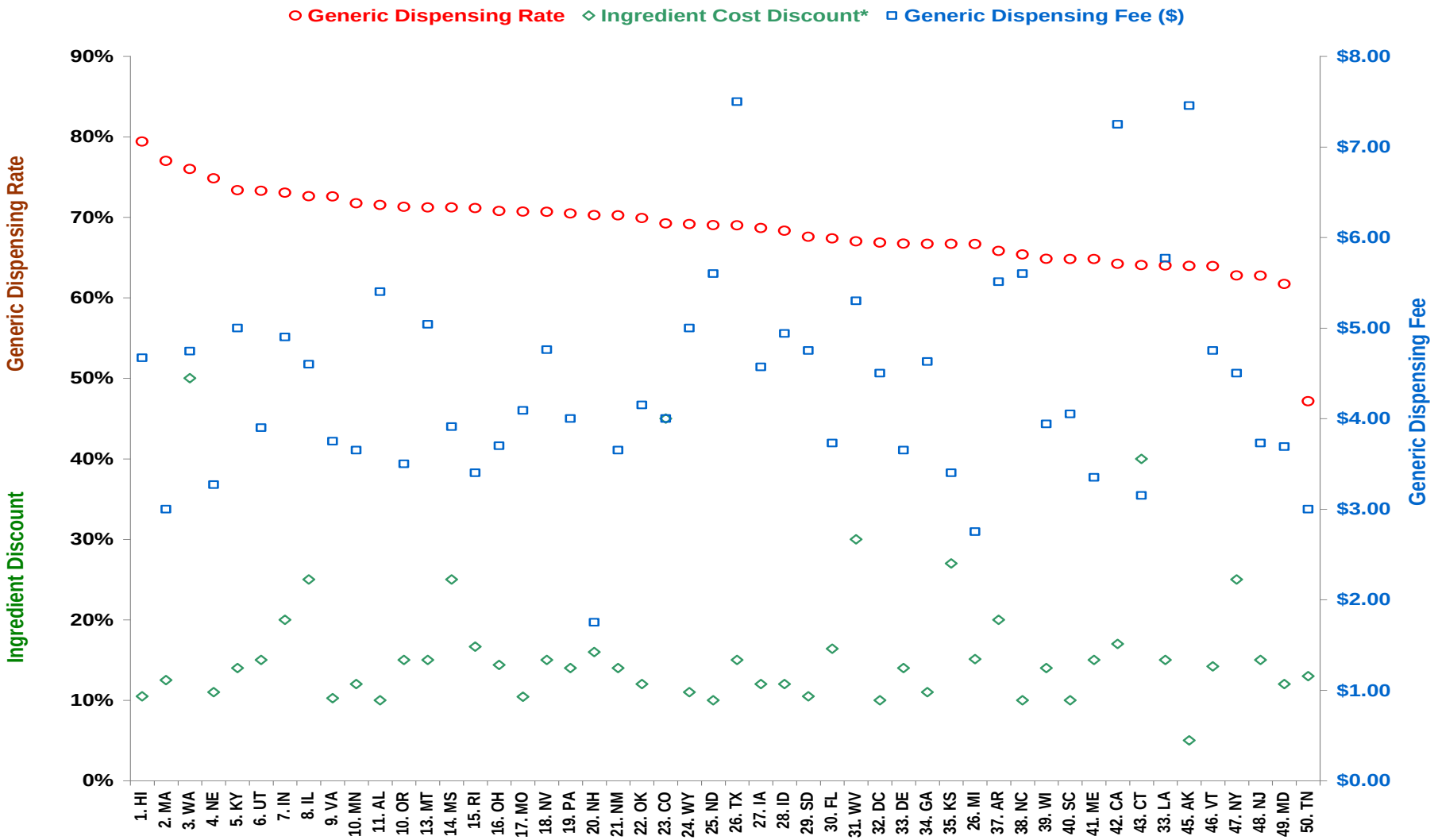
State	10 Year Total Net Savings, 2012-2021	Regular Federal Match Rate (Existing Medicaid)	Federal Share of Net Savings (%)	Federal Share of Net Savings	State Share of Net Savings
Alabama	$754,283,850	68.01%	71.39%	$541,589,986	$212,693,864
Alaska	$215,795,688	52.48%	56.61%	$123,277,462	$92,518,227
Arizona	$0			$0	$0
Arkansas	$431,416,077	72.94%	76.86%	$333,582,219	$97,833,858
California	$4,766,748,752	50.00%	55.25%	$2,664,470,481	$2,102,278,271
Colorado	$237,233,703	50.00%	60.08%	$145,129,408	$92,104,295
Connecticut	$367,654,226	50.00%	52.73%	$195,163,881	$172,490,345
Delaware	$117,607,540	50.21%	51.27%	$60,468,563	$57,138,977
District of Columbia	$72,147,948	70.00%	71.35%	$51,606,201	$20,541,747
Florida	$1,304,852,861	56.83%	63.05%	$832,251,989	$472,600,872
Georgia	$824,347,552	65.10%	67.43%	$558,368,644	$265,978,908
Hawaii	$10,104,490	56.50%	66.12%	$6,784,074	$3,320,416
Idaho	$183,776,906	69.87%	74.90%	$138,704,585	$45,072,321
Illinois	$1,418,325,317	50.32%	56.05%	$804,866,203	$613,459,114
Indiana	$381,476,268	65.93%	68.39%	$262,094,024	$119,382,245
Iowa	$381,537,087	63.51%	68.98%	$265,600,337	$115,936,750
Kansas	$166,825,210	60.38%	62.53%	$104,786,220	$62,038,990
Kentucky	$663,904,563	70.96%	73.48%	$489,938,125	$173,966,438
Louisiana	$1,160,133,184	72.47%	75.44%	$879,404,642	$280,728,542
Maine	$185,456,818	64.99%	66.97%	$124,678,825	$60,777,993
Maryland	$367,616,767	50.00%	53.05%	$196,475,409	$171,141,358
Massachusetts	$175,071,595	50.00%	49.83%	$87,191,071	$87,880,524
Michigan	$453,573,163	63.19%	66.61%	$304,054,861	$149,518,302
Minnesota	$216,899,269	50.00%	52.55%	$114,704,650	$102,194,619
Mississippi	$346,859,255	76.29%	80.38%	$280,410,076	$66,449,179
Missouri	$841,206,791	64.51%	66.27%	$559,461,818	$281,744,973
Montana	$71,270,067	68.53%	75.24%	$54,131,730	$17,138,337
Nebraska	$149,061,637	60.56%	66.09%	$99,486,235	$49,575,402
Nevada	$95,414,317	52.64%	60.28%	$58,357,006	$37,057,311
New Hampshire	$50,083,040	50.00%	56.39%	$28,623,415	$21,459,624
New Jersey	$520,442,515	50.00%	51.91%	$271,482,125	$248,960,390
New Mexico	$11,729,900	71.35%	83.67%	$9,922,916	$1,806,984
New York	$4,561,839,751	50.00%	50.17%	$2,289,876,858	$2,271,962,894
North Carolina	$1,917,502,934	65.13%	69.31%	$1,338,796,858	$578,706,077
North Dakota	$68,118,838	63.75%	70.35%	$48,423,763	$19,695,075
Ohio	$989,615,330	63.42%	65.75%	$638,373,638	$351,241,692
Oklahoma	$525,549,555	67.10%	70.20%	$370,950,440	$154,599,115
Oregon	$112,850,493	62.74%	66.85%	$76,014,671	$36,835,822
Pennsylvania	$389,098,796	54.81%	57.39%	$224,596,327	$164,502,469
Rhode Island	$20,857,795	52.63%	60.05%	$12,701,582	$8,156,214
South Carolina	$686,704,460	70.32%	73.97%	$510,973,952	$175,730,508
South Dakota	$97,860,575	62.72%	68.36%	$67,541,553	$30,319,022
Tennessee	$583,559,943	65.57%	87.09%	$410,240,570	$173,319,372
Texas	$3,787,052,128	60.56%	67.85%	$2,600,124,983	$1,186,927,145
Utah	$137,272,168	71.68%	77.56%	$107,339,203	$29,932,965
Vermont	$124,204,614	59.45%	59.42%	$73,796,325	$50,408,289
Virginia	$362,343,191	50.00%	57.07%	$209,806,945	$152,536,246
Washington	$248,420,229	51.52%	54.52%	$136,396,587	$112,023,642
West Virginia	$409,137,515	74.25%	76.53%	$314,304,332	$94,833,184
Wisconsin	$429,986,267	60.21%	62.25%	$267,986,623	$161,999,644
Wyoming	$59,704,387	50.00%	59.16%	$35,929,608	$23,774,779
US Total	$32,454,535,323	**58.08%**	**62.26%**	**$20,381,241,995**	**$12,073,293,328**

Appendix A. Baseline Pharmacy Costs, CY2011

State	2011 FFS Rx Reimbursement			2011 FFS Rx Scripts		
	Brand	Generic	Total	Brand	Generic	Total
Alabama	$394,250,595	$147,637,139	$541,887,735	2,375,986	5,973,081	8,349,068
Alaska	$78,922,265	$53,637,717	$132,559,982	362,218	643,002	1,005,220
Arizona	$0	$0	$0	-	-	-
Arkansas	$288,982,365	$86,385,058	$375,367,423	1,643,686	3,165,193	4,808,879
California	$2,753,907,069	$513,427,181	$3,267,334,250	12,336,101	22,151,313	34,487,414
Colorado	$217,320,675	$60,192,161	$277,512,836	999,645	2,248,514	3,248,159
Connecticut	$376,586,576	$88,827,053	$465,413,629	1,911,195	3,408,484	5,319,679
Delaware	$116,699,273	$25,079,522	$141,778,795	629,570	1,262,635	1,892,206
District of Columbia	$45,114,447	$11,402,716	$56,517,164	215,901	435,620	651,521
Florida	$1,135,737,595	$168,618,020	$1,304,355,615	4,859,794	10,030,041	14,889,835
Georgia	$553,142,795	$95,078,772	$648,221,567	2,610,131	5,230,197	7,840,327
Hawaii	$7,045,583	$2,149,894	$9,195,476	25,727	99,168	124,895
Idaho	$109,669,206	$20,531,428	$130,200,634	542,856	1,171,197	1,714,053
Illinois	$1,113,299,362	$279,135,705	$1,392,435,067	6,541,253	17,350,303	23,891,556
Indiana	$625,908,363	$97,296,908	$723,205,271	2,486,099	6,739,690	9,225,789
Iowa	$244,214,095	$40,863,224	$285,077,319	1,342,965	2,941,186	4,284,151
Kansas	$183,730,695	$34,939,725	$218,670,420	720,962	1,443,319	2,164,281
Kentucky	$479,160,920	$144,743,764	$623,904,684	3,007,443	8,282,184	11,289,627
Louisiana	$712,986,194	$229,583,283	$942,569,477	4,033,918	7,177,591	11,211,509
Maine	$175,479,953	$23,444,717	$198,924,670	1,062,090	1,955,984	3,018,074
Maryland	$304,682,101	$86,021,673	$390,703,774	1,082,670	1,745,146	2,827,816
Massachusetts	$383,307,071	$101,789,013	$485,096,084	1,874,014	6,278,369	8,152,382
Michigan	$506,152,892	$77,084,873	$583,237,765	2,350,182	4,699,337	7,049,518
Minnesota	$224,515,281	$51,548,938	$276,064,218	1,001,395	2,541,868	3,543,263
Mississippi	$267,541,603	$99,676,494	$367,218,097	1,540,225	3,809,825	5,350,051
Missouri	$650,115,928	$177,084,025	$827,199,952	3,220,939	7,768,991	10,989,930
Montana	$52,571,613	$18,728,191	$71,299,804	260,791	645,309	906,101
Nebraska	$135,617,813	$38,558,452	$174,176,264	700,828	2,084,214	2,785,042
Nevada	$88,499,332	$19,843,680	$108,343,011	374,608	902,747	1,277,355
New Hampshire	$95,761,440	$21,299,152	$117,060,592	462,776	1,093,395	1,556,171
New Jersey	$462,067,065	$126,148,315	$588,215,380	2,167,290	3,651,024	5,818,314
New Mexico	$8,700,630	$1,826,466	$10,527,096	40,519	95,612	136,131
New York	$3,810,717,623	$640,778,652	$4,451,496,276	19,580,270	33,032,611	52,612,881
North Carolina	$1,055,482,753	$235,339,886	$1,290,822,638	5,748,271	10,859,038	16,607,309
North Dakota	$32,761,096	$7,973,366	$40,734,463	181,885	405,096	586,981
Ohio	$1,261,923,056	$208,849,621	$1,470,772,678	6,281,091	15,212,591	21,493,682
Oklahoma	$534,811,995	$86,338,632	$621,150,627	1,638,741	3,807,588	5,446,330
Oregon	$143,588,227	$32,310,590	$175,898,817	575,027	1,427,839	2,002,866
Pennsylvania	$441,250,820	$76,080,092	$517,330,912	2,277,308	5,433,030	7,710,338
Rhode Island	$10,908,571	$2,038,649	$12,947,220	253,065	624,150	877,215
South Carolina	$438,277,123	$69,938,678	$508,215,801	1,554,056	2,862,281	4,416,336
South Dakota	$54,464,946	$11,955,302	$66,420,247	269,019	560,724	829,743
Tennessee	$583,298,500	$145,824,625	$729,123,125	3,424,030	6,908,063	10,332,093
Texas	$1,822,064,765	$519,273,234	$2,341,337,999	9,780,449	21,757,305	31,537,754
Utah	$117,970,728	$43,225,933	$161,196,661	622,020	1,706,988	2,329,008
Vermont	$97,089,134	$17,668,819	$114,757,953	511,565	907,218	1,418,783
Virginia	$245,550,616	$65,156,019	$310,706,635	1,346,212	3,563,736	4,909,949
Washington	$336,729,545	$69,478,608	$406,208,153	1,610,940	5,100,337	6,711,276
West Virginia	$317,423,734	$66,305,132	$383,728,866	1,974,146	4,007,930	5,982,076
Wisconsin	$366,036,547	$77,601,177	$443,637,724	2,552,967	4,708,613	7,261,580
Wyoming	$34,854,404	$7,617,774	$42,472,178	169,067	379,120	548,187
US Total	**$24,496,894,975**	**$5,326,338,049**	**$29,823,233,024**	**123,133,908**	**260,288,796**	**383,422,703**

Source: CY2009 CMS website data. Available Online: <http://www.cms.gov/MedicaidDrugRebateProgram/SDUD/list.asp>. Lewin trend factors used to estimate 2011 costs and usage.

Appendix B. Scatter Diagram Assessing Correlation Between Higher Payments to Pharmacies and Generic Dispensing Rates



Note: FFS Medicaid Programs Ranked by Generic Dispensing Rate (GDR). Arizona excluded because nearly all Medicaid beneficiaries are in managed care.