

**Consolidated Drug Purchasing Across Federal Agencies:
A Policy to Decrease Cost Sharing for Medicare Beneficiaries**

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Abstract

Medicare beneficiaries would experience lower cost-sharing if all federal agencies purchased prescription drugs collectively, even if total drug spending remained the same. Assuming all federal agencies paid the same price for the same drug, prices would decline for Medicare Part D by 4.7% and overall Medicare Part D spending would decline by \$3.17 billion. Prices would increase for Veterans Affairs (VA) and the Department of Defense (DoD) and spending would increase by \$3.17 billion. The main advantage is that cost-sharing for Medicare beneficiaries would decline by \$251.5 million, and there would be no change in cost-sharing for patients receiving drugs through the VA and DoD since cost sharing in these other programs are not based on the price of the drug. Our results suggest that consolidated purchasing could improve the economic well-being of seniors without affecting other government recipients.

1. Introduction

In the Medicare Part D program, cost sharing can be a significant barrier for beneficiaries to access prescription drugs [1]. In comparison to a prescription with no cost sharing, prescriptions with copayments of \$50 are 4.7 times more likely to remain unfilled at the pharmacy [2]. In another study focusing on cost sharing with cancer medications, researchers found higher copayments were associated with a 42% increase in nonadherence [3]. While cost sharing is often implemented with the intent of curbing unnecessary use and reducing health care spending, for drugs it can also result in lower medication adherence and drug abandonment, which are associated with more emergency department visits and hospitalizations [4].

Researchers and policymakers have proposed numerous reforms to Medicare drug policy to address this issue. These reforms tend to involve either Medicare covering a greater portion of drug costs compared to beneficiaries [5] or having Medicare reduce its prices through negotiation [6]. While both strategies would reduce out of pocket spending for Medicare beneficiaries, these policies also present trade-offs that could increase spending by the Medicare program or reduce revenues to drug companies. Should the federal government cover a greater portion of drug costs, such as by eliminating cost-sharing above the catastrophic coverage threshold, then annual Medicare spending would increase by \$3 billion [7]. Alternatively, if Medicare were to obtain lower prices, then pharmaceutical companies might respond by either increasing their launch prices or reduce research and development activities [8].

Another possibility to mitigate patient cost sharing in Medicare Part D is for all federal agencies to pay the same price for drugs. Currently, Medicare pays the highest drug prices of all federal agencies [9]. Because cost-sharing for branded drugs is often calculated as a percentage of the list price [10], high prices in Medicare Part D translate to higher levels of cost-sharing for Medicare beneficiaries.

In this study, we estimated the effects of a consolidated purchasing scenario, where Medicare Part D, the Veterans Affairs (VA) and the Department of Defense (DoD) pay the same price for pharmaceuticals – defined as a weighted-average of the prices currently paid by all

government agencies. Under a consolidated purchasing scenario assuming no changes in the aggregate level of pharmaceutical spending, we assessed changes in prices paid by each agency and changes in cost-sharing for beneficiaries for a basket of drugs representing the largest level of spending in Medicare's four major clinical therapeutic classes.

2. Methods

Drug Identification

Using the Medicare Part D Drug Utilization and Cost Summary from 2014 [11], we identified the brand-name drugs that accounted for greater than 50% of total brand-name Medicare spending within each of four therapeutic classes according to the American Hospital Formulary System [12]: cardiovascular system (n=4 drugs), central nervous system (n=5 drugs), hormones and synthetic substitutes (n=5 drugs), and miscellaneous (n=4 drugs).

Medicare Unit Price Calculation

We used Medicare Part D prescription drug claims data from January 1, 2014 through December 31, 2014 to determine utilization and spending for these 18 drugs according to strength and dosage form. Medicare spending per drug was then adjusted based on the average rebate per class, using the 2014 Medicare Part D Rebate Summary for Brand Name Drugs [12]. Unfortunately, 2014 is the most recent publicly-available rebate information by class. The Medicare unit price was calculated by dividing the rebate-adjusted total Medicare spending per drug by each drug's total utilization.

Medicare cost sharing

Cost sharing levels were identified from Medicare Part D prescription drug event 2014 claims data [13]. On average, beneficiary out-of-pocket spending represented 18.8% of total Medicare Part D drug spending during that year. Among the 18 drugs that we identified, we then disaggregated out-of-pocket payments by benefit phase and used Medicare's Prescription Drug Formulary and Pharmacy Network Files from 2014 [14] to determine whether the beneficiary's out-of-pocket payment represented the full price of the medication, a coinsurance, or a copayment.

VA and DoD Pricing

We calculated price per unit for the VA and DoD using Big Four prices [15] averaged from January 1, 2014 through December 31, 2014. We did not adjust for additional rebates that the VA or DoD could negotiate. We then added a \$13.46 dispensing fee to each price [16], since dispensing fees are included in the Medicare spending data, but excluded from Big Four prices. As we did not have utilization data from the VA and DoD, we determined the VA and DoD average price per unit by multiplying the Medicare weighted-average price per unit by the average ratio of Big Four prices to Medicare prices for our sample of drugs. This was 68.5% of the Medicare price (Exhibit 1).

Total VA and DoD spending on pharmaceuticals was obtained from a Government Accountability Office report in 2013 [17], the most recent publicly available data. We divided total

spending by the unit price to approximate total utilization in each agency in 2014. Because patients who receive prescriptions through the VA or DoD are subjected to fixed-dollar copayments, but not coinsurance [8], we assume there would be no change in the level of cost-sharing to this population under the consolidated purchasing scenario.

Consolidated purchasing

To estimate the combined utilization of Medicare, VA and DoD programs, we summed total spending from these three agencies, and then divided this sum by the average unit price, weighted by utilization. The weighted average price per unit under a consolidated purchasing scenario was calculated by dividing combined spending by the combined utilization. The total spending for all the drugs per agency under consolidated purchasing was calculated by multiplying current spending levels by the ratio of the consolidated purchasing-weighted average price to the current price from each agency. Because we assumed that there would be no net budgetary impact of this policy proposal, the total spending remained constant, and we estimated changes in the cost-shifting between government agencies and its beneficiaries.

We assumed that a consolidated purchasing policy would only affect the out-of-pocket spending for cost-sharing that is based on the price. Thus, it impacts patients paying the full price of the medication in the deductible phase and patients paying coinsurance (Medicare beneficiaries in Initial Coverage phase using specialty-tier medications, or Medicare beneficiaries in Coverage Gap or Catastrophic Coverage phase); however, because of the fixed-dollar nature of copayments, we assumed that the policy would not impact copayment levels that are common in the VA and DoD.

Limitations

There were several limitations in our analysis. First, we used a basket of drugs and not the totality of drugs utilized by each program. Still, the drugs that we analyzed represented the four main therapeutic classes according to the American Hospital Formulary System and accounted for over 50% of pre-rebate spending in each therapeutic class. Second, we used aggregated information for rebates in Medicare Part D and prices without rebates for VA and DoD. Even though this information was not drug-specific, it reflected the most transparent and most recently available data sources. Additionally, it is plausible that if rebates grew in Medicare, then they would have grown in VA and DoD, thus the relative impact of consolidated purchasing on cost sharing and spending would be similar to our analysis. Third, we estimated total drug utilization in the VA and DoD based on aggregated numbers of total spending and unit pricing. Despite these limitations, our study provides a framework for policymakers to estimate how consolidated purchasing would affect costs of various agencies and patients – a necessary analysis should the policy be considered. Fourth, we only focused on these three programs and not programs like the Indian Health Service or Bureau of Prisons that also prescribe drugs.

3. Results

Of the four drug classes in our model, Medicare consistently paid more per unit than either the VA and DoD: 23% higher for cardiovascular drugs, 46% for central nervous system drugs, 72% for hormones and synthetic substitutes, and 48% higher for miscellaneous drugs (Exhibit 1).

The utilization-weighted post-rebate average unit prices were \$7.31 for Medicare and \$5.01 for VA and DoD (Exhibit 2). Using a weighted average unit price of \$6.97 for all agencies and assuming budget neutrality among all federal agencies and their beneficiaries, a consolidated purchasing scenario would decrease overall Medicare Part D spending by \$3.17 billion, which represents 4.7% of total Part D spending in 2014 (Exhibit 3). In order to remain budget neutral, spending increased at the same dollar amount for the other two agencies combined, distributed as \$1.64 billion for the VA and \$1.53 billion for DoD.

Exhibit 1. Baseline Unit Prices and Utilization of Selected Drugs across Government Agencies

Class	Drug	Big Four Price per unit from 2014 schedule	Medicare Price per unit	Number of units purchased in Medicare
Cardiovascular	Crestor	\$3.11	\$4.47	84,126,831
	Zetia	\$3.60	\$4.54	33,776,072
	Diovan	\$3.06	\$3.55	38,027,253
	Tracleer	\$76.93	\$94.05	656,299
CNS	Abilify	\$16.76	\$24.89	17,664,518
	Lyrica	\$2.51	\$3.73	65,935,207
	Namenda	\$3.03	\$4.41	54,414,242
	Celebrex	\$3.24	\$5.52	33,799,238
	Oxycontin	\$5.35	\$6.55	25,492,223
Hormones and Synthetic Substitutes	Advair Diskus	\$3.59	\$3.71	92,355,362
	Januvia	\$5.75	\$7.25	36,797,920
	Symbicort	\$12.95	\$18.41	7,712,616
	Novolog Flexpen	\$3.09	\$17.44	7,077,332
	Levemir Flexpen	\$11.13	\$15.86	6,223,704
Miscellaneous	Revlimid	\$297.19	\$408.76	748,874
	Copaxone	\$116.66	\$208.92	1,055,928
	Sensipar	\$16.22	\$23.65	5,756,590
	Tecfidera	\$54.34	\$76.80	1,381,939

Notes: 1. Utilization in Medicare represents the number of units purchased in our sample. 2. On average, Medicare prices were 68.5% greater than the Big Four prices in this sample.

Caption: Baseline Unit Prices and Utilization of Selected Drugs across Government Agencies

Source: Authors' analysis of data from 2014 Medicare Part D claims and 2014 Big Four price schedule.

Exhibit 2. Prices and Utilization in Baseline vs. Consolidated Purchasing Scenarios

	Baseline (2014 levels)			Consolidated Purchasing
	Medicare	VA	DoD	Combined
Total utilization(1)	9,251,208,802	838,658,916	778,754,708	10,868,622,426
Average unit price (2)	\$7.31	\$5.01	\$5.01	\$6.97

Notes: 1. Total utilization represents the number of estimated units purchased for all brand-name drugs in 2014 by each agency, calculated by dividing total drug spending for each agency by the average unit price. 2. Unit prices represent the estimated utilization-weighted average post-rebate unit price for all drugs in 2014.

Source: Authors' analysis of data from 2014 Medicare Part D claims and 2014 Big Four price schedule.

Exhibit 3. Drug Spending in Baseline vs. Consolidated Purchasing Scenarios

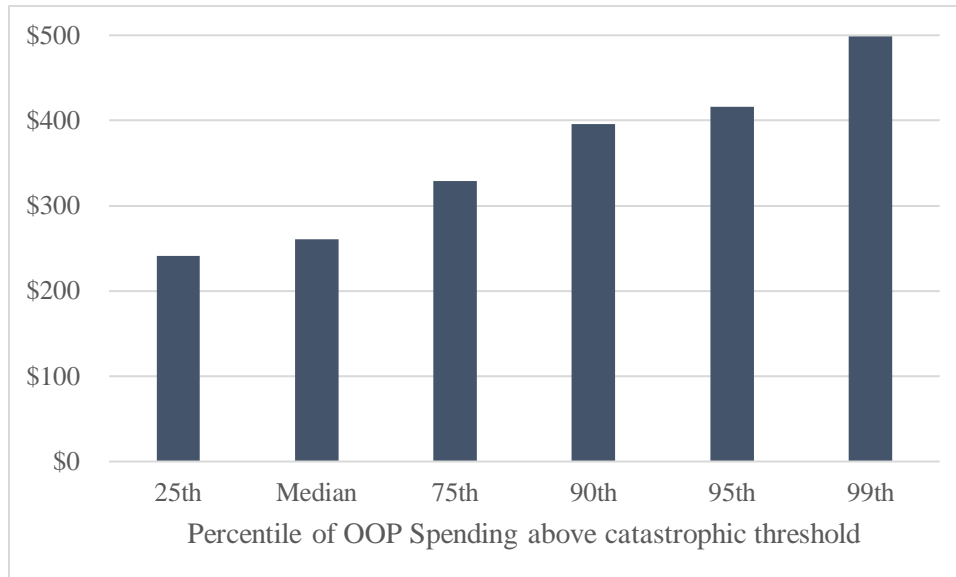
	Baseline	Consolidated Purchasing	Absolute Difference
Medicare Total Spending	\$62,303,885,379	\$59,380,562,639	(\$2,923,322,740)
VA Total Spending	\$4,200,000,000	\$5,846,204,822	\$1,646,204,822
DoD Total Spending	\$3,900,000,000	\$5,428,618,763	\$1,528,618,763
Medicare Deductible and Coinsurance Spending	\$5,360,160,764	\$5,108,659,919	(\$251,500,845)
Medicare Copayment Spending	\$9,021,834,373	\$9,021,834,373	-

Source: Authors' analysis of data from 2014 Medicare Part D claims and 2014 Big Four price schedule.

The main impact of this proposal is that consolidated purchasing would reduce the annual cost-sharing burden for Medicare enrollees. Assuming Part D cost sharing would be sensitive to the price being paid by the Medicare program (payments in the deductible phase or coinsurance), total cost-sharing for Medicare beneficiaries would be reduced by \$251.5 million under consolidated purchasing (4.7% reduction from baseline levels). The absolute savings would be greater for those who have higher out-of-pocket costs and filled drugs with coinsurance versus

copays. For beneficiaries in the catastrophic coverage phase, consolidated purchasing would represent savings of \$261 (median) and \$499 (99th percentile) per year (Exhibit 4).

Exhibit 4: Out-of-Pocket Savings Under Consolidated Purchasing for Medicare Part D Beneficiaries in the Catastrophic Coverage Phase



Notes: Bars represent the average savings in out-of-pocket spending for beneficiaries in the catastrophic coverage phase, as defined by those who exceeded the out-of-pocket threshold of \$4,550 in 2014 (N = 86,425).

Source: Authors' analysis of data from 2014 Medicare Part D claims.

4. Discussion

Our analysis suggests that a consolidated purchasing scenario would result in a reduction in cost-sharing for the average Medicare beneficiary, with greater savings for beneficiaries at the highest distribution of drug spending. This could be done without any harm to either drug companies or federal beneficiaries. Because of the fixed-dollar cost-sharing structure of the VA and DoD programs, the proposal would not impact cost to these enrollees. Also, because the proposal does not affect overall spending, revenue to pharmaceutical companies would remain unchanged.

Previous policy proposals on decreasing Medicare Part D prices to VA and DoD rates suggest that Medicare would save between \$14-22 billion per year [18]. Our analysis differs from these proposals in two main aspects. As our proposal uses a weighted-average price among federal agencies, Medicare savings would be less than prior estimates from policy proposals that would allow Medicare to obtain VA prices [16]. Second, our proposal is budget neutral and would raise VA and DoD spending on pharmaceuticals. However, assuming that cost-sharing rules remain the same for these agencies, it would not affect VA and DoD beneficiary out-of-pocket spending. We

acknowledge that consolidated purchasing across federal programs would increase the monopsony power of the government in the pharmaceutical market and this may result in additional savings if Congress chose to use this option.

Spillover Effects

There are several potential spillover effects that may result from a consolidated purchasing policy. The VA and DoD may respond to the price increases by changing the cost sharing rules to increase the burden on patients or reducing spending on other health care services. If the federal government used its regulatory and monopsony power to achieve a price lower than a weighted average, then pharmaceutical companies may respond to this reduction in revenue by increasing prices in the private insurance market. However, this assumes they are not already choosing the profit maximizing price. Finally, should Medicare patients increase their adherence rates due to the decrease in cost-sharing levels, this could result in fewer hospitalizations and inpatient stays.

5. Conclusion

Mitigating patient cost sharing in Medicare Part D has motivated various policy efforts, such as eliminating cost-sharing in the catastrophic coverage phase and Medicare decreasing prices through negotiation as a single agency. Our proposal offers policy makers an alternative that would still reduce cost sharing without substantially increasing spending on behalf of the federal government, nor reducing revenues to the pharmaceutical companies.

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6. Endnotes

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