



## Generic Drug Utilization and Spending Among Medicare Part D Enrollees in 2022

In 2022, 43.3 million Medicare Part D enrollees (82 percent) filled 1.1 billion prescriptions for generic prescription drugs. While most enrollees filled at least one prescription for \$2 or less, most (54 percent) also paid more than \$2 for at least one generic drug. Over 6 million enrollees (12 percent) filled at least one generic prescription for over \$20. A standardized formulary of high-value generics that cost beneficiaries \$2 or less in out-of-pocket spending would reduce confusion and help enrollees afford their prescription drugs.

Yevgeniy Feyman, Bisma Sayed, Kenneth Finegold, Anne Hall, Micah Johnson, Rachael Zuckerman, Steven Sheingold, Thomas Buchmueller, Nancy De Lew

### KEY POINTS

- Medicare Part D enrollees had 1.1 billion prescriptions for generic drugs, accounting for nearly 2 billion 30-day equivalent prescriptions, \$5.7 billion in patient out-of-pocket (OOP costs), and \$32.9 billion in gross drug costs.
- If all fills for generics had been filled at \$2 or less for a 30-day supply, total OOP would have been \$1.6 billion – a reduction of \$4.1 billion or around 71 percent.
- 43.3 million of the 53.1 million Medicare Part D enrollees (82 percent) filled at least one prescription for a generic drug. Of these, 28.6 million (54 percent) had at least one generic fill with OOP costs greater than \$2. Nearly 6.5 million enrollees (over 12 percent) had at least one generic fill with OOP greater than \$20.
- In total, 70.5 percent of all 30-day equivalents were filled for \$2 or less.
- There was large variation in cost-sharing across even the most commonly used generic drugs. While average OOP spending for a common high cholesterol treatment, atorvastatin, was less than \$2, nearly 30 percent of 30-day equivalent prescriptions cost more than \$2 for enrollees.
- Five drugs among the 20 generics most commonly used by Medicare enrollees (clopidogrel bisulfate, gabapentin, pantoprazole sodium, metoprolol succinate, and omeprazole) had over 40 percent of 30-day equivalent prescriptions with OOP costs greater than \$2.
- Of the 20 most commonly used drugs, nine had average OOP greater than \$2.
- While generic dispensing rates were similar among Low-Income Subsidy (LIS) and non-LIS enrollees, LIS enrollees paid substantially less in OOP for generic drugs (\$0.59) than non-LIS enrollees (\$4.00) on average.
- Enrollees in Medicare Advantage Prescription Drug Plans (MA-PDs) were more likely to fill at least one generic drug (87.7 percent) than enrollees in standalone Part D plans (PDPs) (82.7 percent) or

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those with employer plans (EGWPs) (59.3 percent). MA-PD enrollees also had lower annual OOP spending on generic drugs (\$98) than PDP (\$163) or EGWP enrollees (\$181).

- Among non-LIS enrollees, those in MA-PD plans had the lowest average OOP burden per 30-day equivalent (\$4.49), after adjusting for differences in generic drug use and other factors.
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## BACKGROUND

Generic drugs are a critical part of the U.S. strategy for achieving value in prescription drug utilization, improving health outcomes, and promoting competition in health care markets. The Drug Price Competition and Patent Term Restoration Act of 1984 (commonly known as the Hatch-Waxman Amendments) established various exclusivity periods for branded small-molecule prescription drugs and a 180-day generic drug exclusivity period for the first manufacturer to submit a certification for patent invalidation.<sup>1</sup> After losing patent protection and/or exclusivity, generic versions of branded drugs may enter the market, creating competition for the initial drug. Existing research has overwhelmingly found that when generic drugs enter the market, prices fall substantially, with prices falling as low as 30 percent of the brand price just three years after entry, with more generic entrants further lowering the price.<sup>2-6</sup> These price reductions have the potential to result in savings for the health care system and reductions in patient out-of-pocket (OOP) costs.<sup>4</sup> Generic drug dispensing in the United States across all prescription drugs (including those without generic alternatives) stands at 80 percent of dispensing,<sup>7</sup> and at over 90 percent in the Part D program.<sup>8</sup>

While gross prices fall for drugs after generic entry, recent evidence suggests that only some of the potential savings from generic competition are passed on to patients in terms of reduced OOP costs. Some studies have found that at least some generic drugs have seen increases in price and OOP costs for patients,<sup>9</sup> with other work finding that even among generic drugs with competition, price reductions are not fully passed along to patients.<sup>10</sup> A more recent study found that generic prices often substantially exceeded acquisition costs, resulting in higher OOP payments than would otherwise be expected.<sup>11</sup> Thus, while generic drugs play a vital role in improving access to medications, there may be market dynamics that limit the extent to which patients can fully take advantage of these benefits.\* These dynamics may lead to variation in how generic drugs are covered and priced for patients across Part D plans, leading to use of potentially more expensive and/or less effective drugs as well as reduced adherence.

Medicare enrollees might avoid taking prescribed medications due to limited price transparency and affordability.<sup>12-14</sup> Indeed, though most Part D plans include small copayments for generic drugs, copayments are not standardized and can vary by plan.<sup>15</sup> The addition of other insurance design features such as preferred versus non-preferred tiering, coinsurance versus copayments, prior authorization, step therapy requirements, and quantity limits makes filling a prescription even more complex. The result is that enrollees often do not know the price they are paying<sup>16</sup> until they are at the pharmacy counter.<sup>†</sup> Providers face similar challenges as patients because they are often unable to determine the most cost-effective drug for their patients, even though they may want to consider patient cost burden in their clinical decisions.<sup>17</sup>

Addressing these issues is critical to ensuring that Medicare enrollees can achieve the maximum health benefit from effective therapies. There is strong, consistent evidence finding a relationship between OOP cost and patient adherence to medications.<sup>18-21</sup> And in some settings, value-based insurance designs that either substantially lower or eliminate the copayment for a high-value drug (such as drugs used to treat common chronic conditions) have been shown to increase take-up of the drug.<sup>22-25</sup> Improved adherence is likely to lead

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\* While generic utilization may benefit enrollees more generally through reduced premiums, this is a less direct effect for patients who take the drug.

† Recent efforts to make drug costs more transparent to enrollees include real-time benefit tools that PDP sponsors are required to offer as of 2023.

to better outcomes for patients, a higher quality of life, and potentially lower utilization of medical treatments.<sup>26,27</sup> If price reductions due to generic entry or other dynamics are passed along to patients in the form of lower OOP cost (e.g., through lower copayments), these price reductions are likely to increase the use of the generic drug, improving both adherence to the therapy and health outcomes.

While there are also non-cost barriers to care, these aspects of the generic drug market present opportunities for Part D improvements that reduce OOP cost sharing for certain prescription drugs. On October 14, 2022, President Biden issued an executive order directing the Secretary of the Department of Health and Human Services (HHS) to consider testing models aimed at improving prescription drug affordability and access for Medicare and Medicaid enrollees through the Center for Medicare and Medicaid Innovation (CMMI).<sup>28</sup> In response to the executive order, HHS issued a report outlining three models geared towards improving the use and development of high-value drugs.<sup>29</sup> As noted in the report, one of these models, the Medicare \$2 Drug List (M2DL) Model, would create a high-value generic drug list that Medicare Part D prescription drug plan sponsors could offer enrollees at a low, fixed copayment (up to \$2 for a month's supply) without restrictions such as step therapy, prior authorization, or quantity limits.

With the M2DL model in development,<sup>30</sup> the purpose of this Issue Brief is to understand the scope of generic drug utilization at baseline and reflect on the potential impact this model could have on making generic drugs more accessible and more affordable to Medicare beneficiaries with Part D coverage.<sup>‡</sup> We document the landscape of generic drug spending among Part D enrollees in 2022, focusing on OOP spending. One objective of the model would be to make OOP payments at the pharmacy more transparent and predictable to both the Medicare enrollee and the prescribing physician. Variation in OOP payments across and within drugs can occur due to differences in drug prices and Part D Plan formulary designs. In this paper, we detail the variation of OOP costs across generic drugs used by enrollees as well as the variation in OOP costs for specific drugs, both of which may occur due to these factors. Additionally, we address differences in OOP costs and generic utilization rates for Medicare enrollees overall, and how they differ across demographic characteristics, low-income subsidy [LIS] enrollment,<sup>§</sup> and plan characteristics.

## METHODS

We relied on the 2022 Part D prescription drug event (PDE) file to identify utilization of all prescription drugs with a generic alternative available. We focused on drugs with at least 300 prescriptions (to ensure adequate volume), and that had a marketed generic and an approved Abbreviated New Drug Application (ANDA).<sup>\*\*</sup> Enrollee characteristics were drawn from the Master Beneficiary Summary File (MBSF). Enrollee OOP payment was defined as the patient pay amount from PDE data, regardless of formulary status. LIS status was defined based on whether the enrollee was ever enrolled in the LIS program within the year.

All costs were calculated after the enrollee reached their respective deductible. We focused on the post-deductible phase for each enrollee because the OOP payment determined by coinsurance or copayments, which has been shown to affect prescription drug utilization, takes effect in this phase.<sup>31,32</sup> Additionally, because utilization post-deductible is more likely to capture the copayments or coinsurance required by plans, it is more comparable to a \$2 or less standardized formulary considered under the M2DL. Where a generic

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<sup>‡</sup> Note that M2DL model parameters are still being determined, and changes to cost-sharing for certain drugs may signal other changes to achieve actuarial equivalence requirements. We do not explicitly consider these secondary effects.

<sup>§</sup> For eligible enrollees whose income and resources are limited, the Medicare Prescription Drug, Improvement and Modernization Act of 2003 established the Low-Income Subsidy, also known as Extra Help. Subsidies are paid by the Federal government to drug plans and provide assistance with premiums, deductibles, and co-payments. Under the Inflation Reduction Act, beginning in 2024, the LIS program is expanded to individuals with limited financial resources and incomes up to 150 percent of the Federal Poverty Limit (FPL), which is about \$21,870 per individual in 2023. For more information, please see [here](#).

<sup>\*\*</sup> ANDAs are the applications submitted to FDA for review and potential approval of a generic drug.

drug is covered through a copayment or coinsurance (by waiving the deductible), these instances are included as long as the PDE was listed with a post-deductible phase. Straddle claims (those that cross phases) are also included.

Prescription drugs were categorized into pharmaceutically equivalent products (PEPs) using the Medi-Span Generic Product Identifier. This classification system classifies drugs into a unique combination of dosage, dosage form, and active ingredient. We then collapsed PEPs into their underlying active ingredient, aggregating over different dosing forms and strengths. When referring to drugs, we are referring to the active ingredient that may represent a combination of drugs.

To identify enrollee plan type, we used a hierarchy based on the number of months enrolled in a particular plan type. This assigned enrollees to the plan type they were enrolled in for the most months. Included plan types were Employer group-waiver plans (EGWP), Medicare Advantage plans with prescription drug benefits (MA-PD), and standalone prescription drug plans (PDPs). Program of All-Inclusive Care for the Elderly (PACE) plans were excluded because they have very low enrollment, cannot charge cost-sharing, and serve a very specific population.

Enrollee rurality was identified based on the enrollee's zip code and county of residence. This was mapped to a core-based statistical area (CBSA), which is in turn classified as Rural-Micropolitan or Urban-Metropolitan. Valid zip code and county combinations without a categorization were categorized as Rural-Other. Zip code and county combinations which cannot be located in zip code data (e.g. they are located outside of the U.S., or are populated with invalid values) are marked as "Unclassified."<sup>33</sup>

When referring to enrollees, estimates are at the annual level. When referring to individual drugs, estimated averages and distributions are based on individual fills. In addition, we calculated 30-day equivalent supply to account for plan design and enrollee preference that could lead to differences in days supplied. We calculated 30-day equivalents by calculating total days supplied and dividing by 30.<sup>††</sup> Thus, a supply of less than 30 days was treated as a partial 30-day supply. Except where otherwise noted, all analyses are presented restricted to generic prescriptions and exclude the brand-name prescriptions.

In the last section we present adjusted estimates of OOP spending. We performed this adjustment through a linear regression of OOP for a 30-day equivalent on the following variables: plan type, the type of pharmacy filling the prescription, and enrollee rurality. All variables were also interacted with LIS status to account for differential use of drugs and enrollment by plan type and by LIS status. Additionally, this regression included PEP fixed effects to account for differences in drug mix, dosage, and form of the drug. Analytic weights for total number of 30-day equivalents were applied to ensure that results are nationally-representative. This adjustment accounts for differences in drug mix used by enrollees, the plan types in which they enroll, the rurality of where they live, and other factors that may affect how much enrollees pay in out-of-pocket costs.

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<sup>††</sup> Note that this differs from the 30-day equivalent supply methodology used for the Medicare Drug Price Negotiation Program under the Inflation Reduction Act, which matches the methodology specified in 42 C.F.R. § 423.104(d)(2)(iv)(A)(2): if the days' supply reported on a PDE is less than or equal to 34, the number of 30-day equivalent supplies equals one. If the days' supply reported on a PDE is greater than 34, the number of 30-day equivalent supplies is equal to the number of days' supply reported on each PDE divided by 30.

## FINDINGS

### Generic Drug Utilization and OOP Costs

The majority of Part D enrollees – 43.3 million of 53.1 million total enrollees (81.6 percent) – filled at least one prescription for a generic drug in 2022. In that year, there were nearly 1.2 billion fills for drugs with generic alternatives. Over one billion of these (94.6 percent) were for the generic version, accounting for nearly 2 billion 30-day equivalents.<sup>\*\*</sup> This indicates that prescriptions were often filled for more than a 30-day supply.

Among fills for generic versions, enrollee spending reached \$5.7 billion in patient out-of-pocket (OOP) payments and \$32.9 billion in gross drug costs (GDCs).<sup>§§</sup> While 73.1 percent (38.8 million enrollees) of Part D enrollees filled at least one prescription for \$2 or less, more than half (28.6 million) filled at least one prescription for more than \$2. In total, 70.5 percent of all 30-day equivalents were filled for \$2 or less. If all fills for generic drugs had been filled at \$2 or less for a 30-day supply, total OOP would have been \$1.6 billion – a reduction of \$4.1 billion or around 71 percent.

The high rate of fills for \$2 or less is consistent with existing work finding that median copays in the Part D program were \$0 for preferred generics in 2022. For other generics, median copays ranged from \$5 to \$10.<sup>34</sup>

### Plan Type and LIS Status

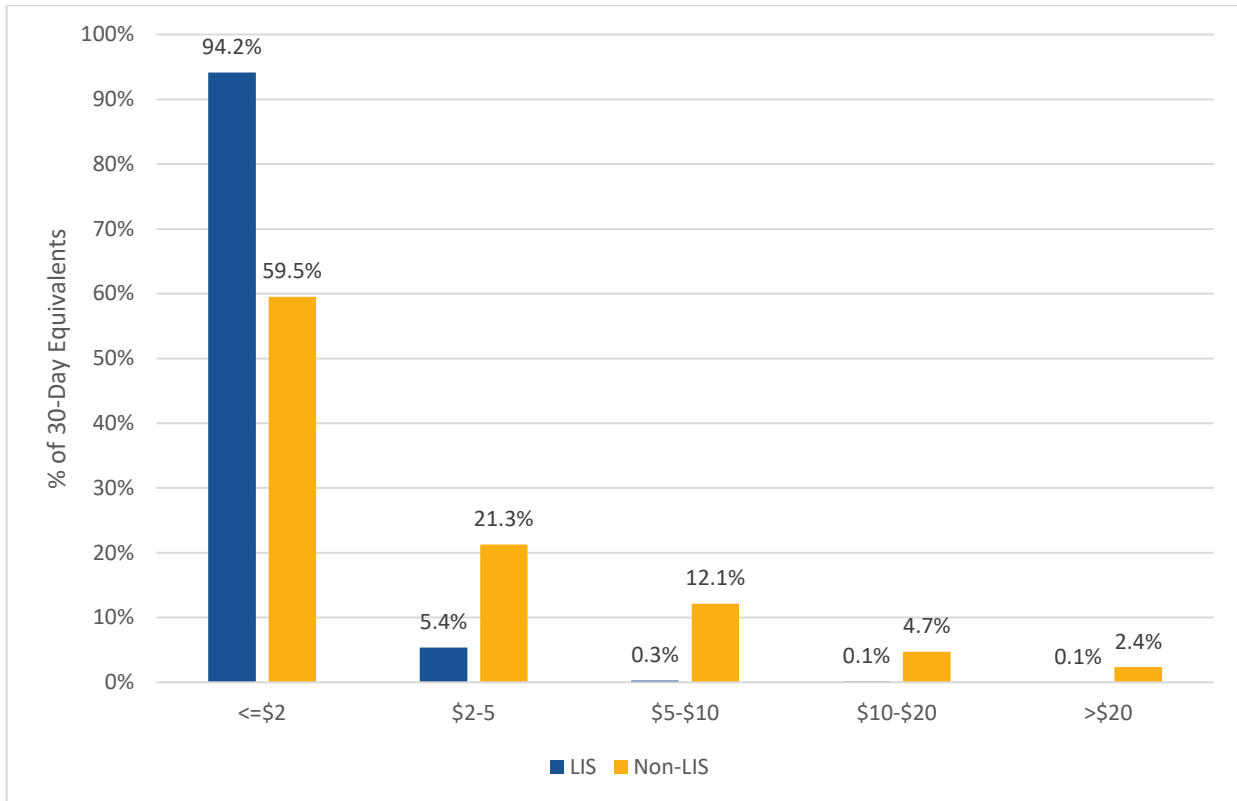
Many enrollees qualify for the low-income subsidy LIS benefit (over 25 percent). Due to the financial protections provided by this benefit, LIS enrollees paid less OOP for drugs than non-LIS enrollees. As shown in Figure 1, those receiving LIS benefits filled over 94 percent of 30-day equivalents for \$2 or less, compared to just under 60 percent for those without LIS benefits. While filling a prescription for more than \$20 was rare among LIS enrollees, 2.4 percent of 30-day equivalents for generics were filled for more than \$20 by non-LIS enrollees. In 2022, Full LIS enrollees had copayments limited to \$3.95 for generic drugs, and Partial LIS enrollees had coinsurance limited to 15 percent.<sup>35</sup>

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<sup>\*\*</sup> Among all Part D enrollees, there were 2,212 unique drugs with generic alternatives available and 887 unique active ingredients among all Part D enrollees.

<sup>§§</sup> The gross drug cost represents total spending for the prescription claim, including Medicare, plan, and enrollee payments

**Figure 1. Cost-Sharing Distributions for Generic Drugs by LIS and Non-LIS Enrollees**



**Note:** Percentages reflect the share of 30-day equivalents falling into each cost-sharing category. Restricted to generic formulations. LIS: low-income subsidy.

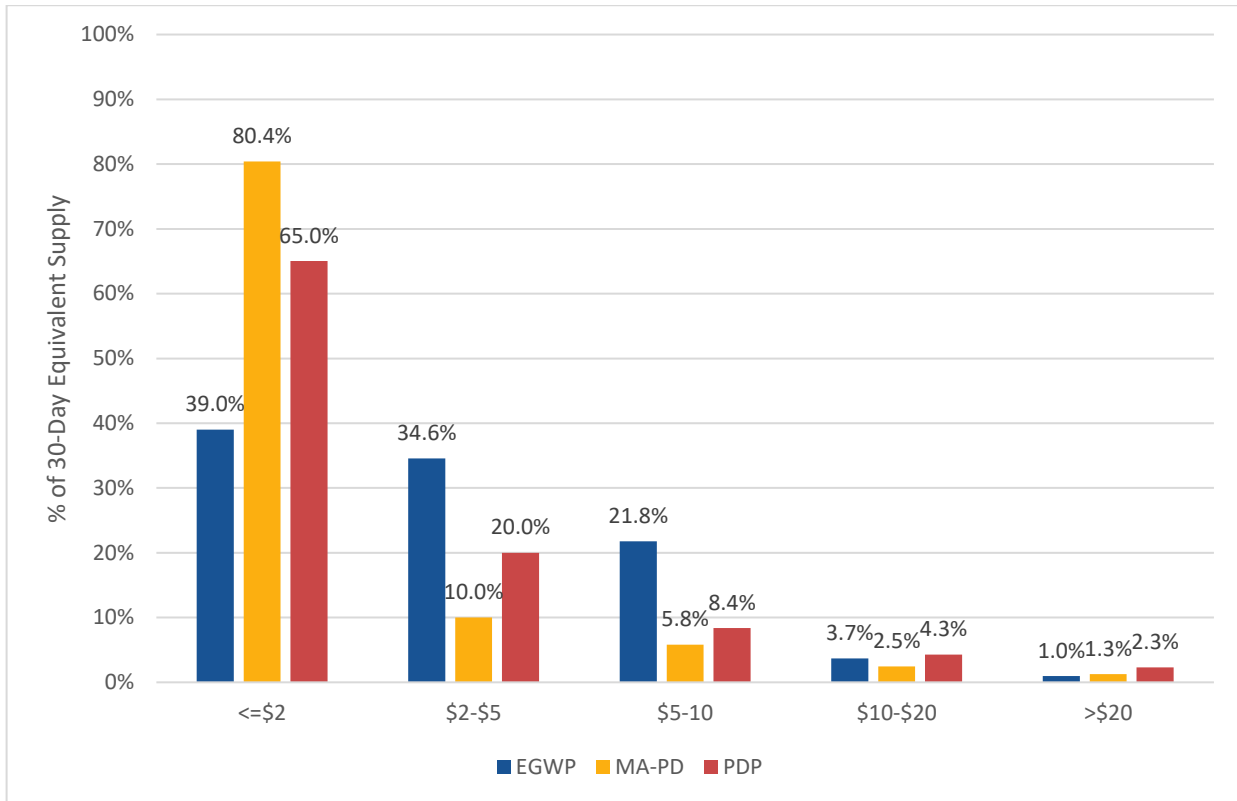
Based on their choice between Medicare Advantage and the Traditional Medicare (TM) program, and the availability of employee retirement plans for some individuals, Part D enrollees may receive coverage from MA-PDs, PDPs, or EGWPs. These plan types may vary in drug coverage and formulary design.

We identified differences in OOP burden and generic utilization by plan type. MA-PD enrollees were more likely to fill at least one generic and had lower OOP costs per generic fill, regardless of LIS status. This could be due to differences in enrollee characteristics and preferences, or potentially because MA-PD plans are also responsible for enrollees' Medicare Parts A and B costs, which could incentivize the plans to improve access to and promote the use of prescription drugs to reduce high-cost health service use in other settings.<sup>36</sup> MA-PD plans can also use rebate dollars to buy down Part D supplemental premiums, thereby offering richer benefits for the same premium amount. While MA-PD enrollees (87.7 percent of enrollees) were somewhat more likely than PDP enrollees (82.7 percent of enrollees) to use at least one generic drug, enrollees in EGWPs filled at least one generic at a much lower rate (59.3 percent of enrollees).<sup>\*\*\*</sup>

In addition to differences in generic utilization, there were large differences in OOP burden faced by enrollees in different plan types. MA-PD enrollees were the most likely to fill a 30-day equivalents for \$2 or less (80.4 percent of 30-day equivalents), while EGWP enrollees were the least likely (39 percent of 30-day equivalents) (Figure 2).

<sup>\*\*\*</sup> EGWP plans are non-bidding plans, are not open to general enrollment, and have enrollment that is substantially different from other plans offered. These differences, in addition to differences in plan design, may contribute to differences in the likelihood of using generic drugs.

**Figure 2. Cost-Sharing Distributions for Generic Drugs by Plan Type**



**Note:** Percentages reflect the share of 30-day equivalents falling into each cost-sharing category. Restricted to generic formulations. EGWP: Employer Group Waiver Plan. MA-PD: Medicare Advantage Prescription Drug Plan. PDP: Standalone Prescription Drug Plan.

Average OOP costs varied in a similar way across plan types. On average, EGWP enrollees tended to pay the most for 30-day equivalents (\$4.34), while MA-PD enrollees paid the least (\$2.09). Average OOP costs per 30-day equivalent were \$4.00 for non-LIS enrollees and \$0.59 for LIS enrollees. (Table 1)

Because the share of enrollees with LIS varies by plan type (for instance, as shown in Table 1, LIS enrollees tend to be under-represented in EGWP plans), observed variation in cost burden across plan types may be driven partly by differences in enrollment of LIS enrollees. However, this did not substantively affect the observed cost distribution (Figure A1) or the costs faced by enrollees on average. (Table 1) Overall, these findings were consistent with prior work finding that MA-PD plans are more likely to include covered generics on the lowest cost-sharing tiers than PDPs.<sup>37</sup>

**Table 1. Average Generic OOP by Plan Type & LIS Status**

LIS Status	Plan Type	Average OOP Per 30-Day Equivalent	Total Enrollment (% of Part D)
All	EGWP	\$4.34	7,867,959 (14.8%)
	MA-PD	\$2.09	25,073,192 (47.2%)
	PDP	\$3.72	20,142,234 (37.9%)
LIS	EGWP	\$0.88	139,465 (0.3%)
	MA-PD	\$0.52	8,585,438 (16.2%)
	PDP	\$0.71	6,068,432 (11.4%)
Non-LIS	EGWP	\$4.44	7,728,494 (14.6%)
	MA-PD	\$3.03	16,487,754 (31.1%)
	PDP	\$5.09	14,055,802 (26.5%)

**Note:** 30-day equivalent includes only generic formulation. Generic dispensing rate calculation excludes a small number of fills with an unknown brand/generic designation. LIS: low-income subsidy. EGWP: Employer Group Waiver Plan. MA-PD: Medicare Advantage Prescription Drug Plan. PDP: Standalone Prescription Drug Plan. OOP: out-of-pocket cost. Overall average OOP costs per 30-day equivalent were \$2.92; for LIS enrollees they were \$0.59; for non-LIS enrollees they were \$4.00.

We found little variation in the share of 30-day equivalents filled as generics (the generic dispensing rate) by LIS status. The generic dispensing rate varied from 93.4 percent among non-LIS enrollees in EGWP plans to 95.8 percent among non-LIS enrollees in MA-PD plans. For LIS enrollees, the generic dispensing rate was highest in MA-PD plans (95.2 percent) and lowest in PDPs (94.3 percent).

Overall, these results indicate plan choice and LIS status affects OOP burden, with enrollees in MA-PD plans spending the least in average OOP costs.

## Rurality

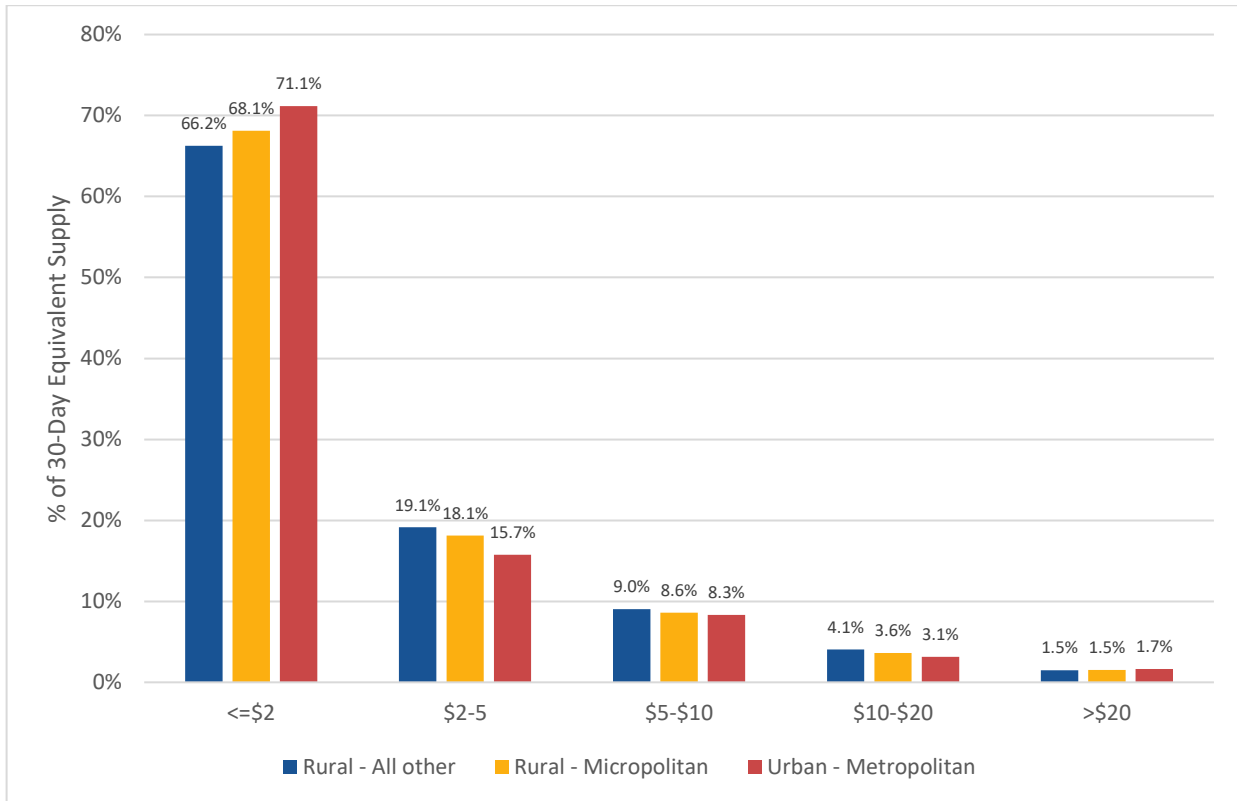
Existing evidence suggests that individuals living in rural areas as compared to urban areas may have different health needs and potentially have worse access to care.<sup>†††</sup> Lack of access to nearby retail pharmacies may in turn lead to differential use of mail order pharmacies,<sup>38</sup> which may affect OOP spending and generic drug utilization. If mail order pharmacies offered lower cost-sharing and were disproportionately used by rural enrollees, this could reduce the cost burden of these drugs.

Consistent with the evidence suggesting different health care needs and access to care among the rural population, enrollees in rural areas were the least likely (68.1 percent of fills for micropolitan areas and 66.2 percent of fills for all other rural areas) to fill a 30-day equivalent for \$2 or less (Figure 3). While LIS enrollment could affect the likelihood of filling a 30-day equivalent for \$2 or less, these findings also held when the sample was restricted to non-LIS enrollees (Figure A2), suggesting that there are other factors playing a role.

<sup>†††</sup> See: <https://www.cms.gov/priorities/health-equity/rural-health>



**Figure 3. Cost-Sharing Distributions for Generic Drugs by Rurality**



**Note:** Percentages reflect the share of 30-day equivalents falling into each cost-sharing category. Restricted to generic formulations. Rural definitions are based on core-based statistical area (CBSA) definition. Rural-All Other: These are all other areas with valid Zip codes that are neither Micropolitan nor Metropolitan. Rural-Micropolitan: These are regions with an urban area that has more than 10,000 but fewer than 50,000 residents. Urban-Metropolitan: These are regions with an urban area that has more than 50,000 residents. Excludes areas with invalid Zip codes.

These differences in cost-sharing distribution likely contributed to slight differences in OOP burden by rurality. In general, rural enrollees paid more in OOP for a 30-day equivalent than those in urban areas (Table 2).

**Table 2. OOP Costs by Rurality**

Plan Type	OOP Per 30-Day Equivalent	Total 30-Day Equivalents (%)
Rural – All Other	\$3.17	141,392,290 (7.5%)
Rural – Micropolitan	\$3.03	197,469,217 (10.4%)
Urban – Metropolitan	\$2.89	1,558,123,256 (82.1%)

**Notes:** Excludes areas with invalid Zip codes. OOP: out-of-pocket cost.

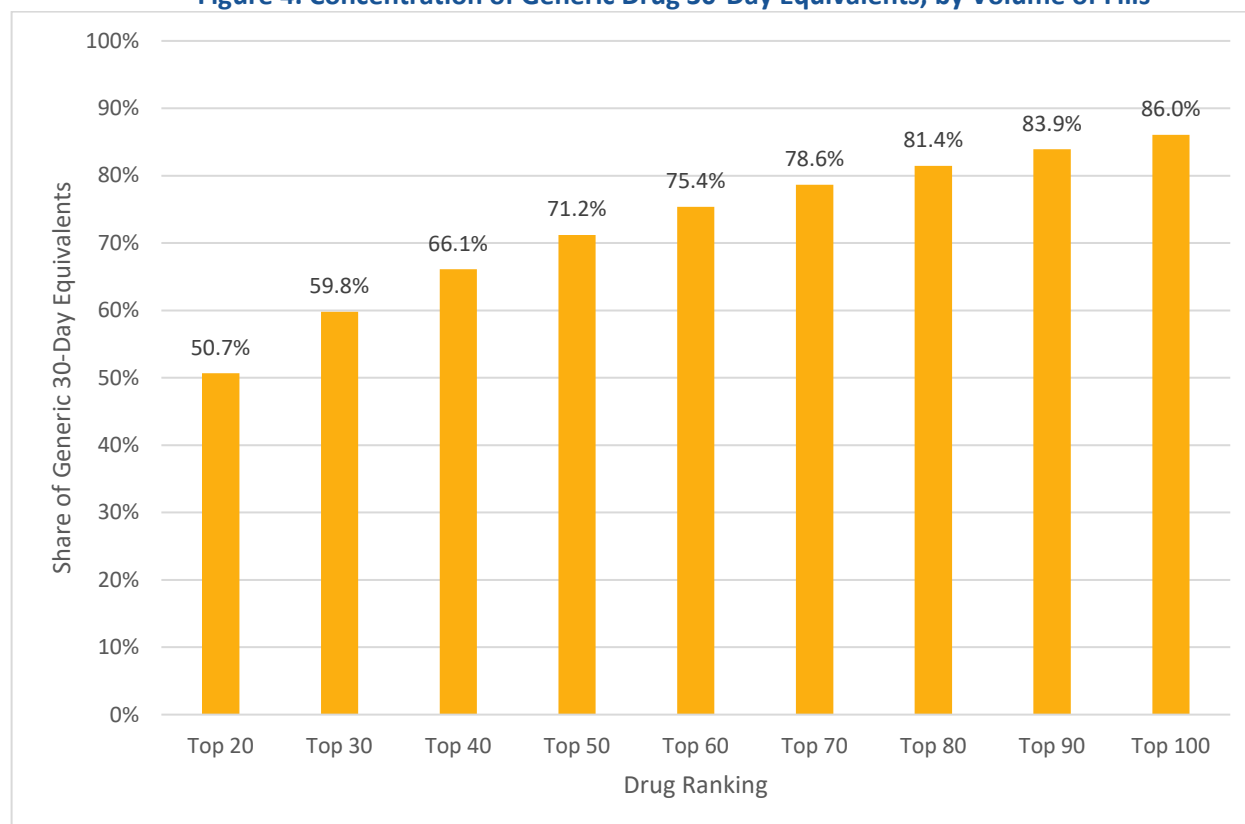
Surprisingly, we found little difference in the use of mail order pharmacies by rurality. Urban enrollees used mail order pharmacies at a rate similar (14.3 percent) to those in micropolitan areas (14.0 percent) and all other rural areas (14.4 percent).

Variation in OOP burden for generic drugs among the rural population tended to be somewhat higher than elsewhere, and rural enrollees were the least likely to obtain prescriptions for \$2 or less. These results were consistent even when accounting for differences in drug mix, LIS status, and other characteristics.

### Variation in OOP Payments for the Most Commonly Filled Drugs

Figure 4 shows that the distribution of generic drug utilization is highly concentrated. The top 20 generic drugs, ranked by number of fills in 2022, accounted for 988.7 million 30-day equivalents (roughly half of all drugs with a generic alternative) and \$1.4 billion in OOP spending by enrollees.<sup>\*\*\*</sup> The top 30 drugs represented nearly 60 percent of 30-day equivalents, and the top 100 drugs represented 86 percent of 30-day equivalents.

**Figure 4. Concentration of Generic Drug 30-Day Equivalents, by Volume of Fills**



**Notes:** Restricted to generic formulation. Calculation is the number of 30-day equivalents for drugs falling into a given grouping divided by total generic drug 30-day equivalents.

Because LIS enrollees receive additional protection from OOP costs, LIS enrollees tended to have substantially lower OOP spending and improved adherence to prescription drugs.<sup>39-42</sup> Among LIS enrollees, all of the top 20 drugs had average OOP less than one dollar (Table A2), while OOP was significantly higher for the non-LIS population. Because of these low costs for LIS enrollees, we primarily focus on the non-LIS population.

Among the most commonly filled drugs, atorvastatin, a drug for high cholesterol, was the most prescribed generic drug at 97.5 million 30-day equivalents and \$128.7 million in OOP spending in 2022. OOP costs for the top 20 drugs varied. The least expensive (in terms of average OOP cost) among the top 20 drugs was hydrochlorothiazide, a treatment for high blood pressure, at an average OOP of \$0.74 per 30-day equivalent. The most expensive was gabapentin, a common anti-seizure and nerve pain medication, at an average OOP of \$4.64 for a 30-day equivalent (Table 3). The 20 most commonly filled drugs treat some of the most common chronic conditions in the Medicare population including hypercholesterolemia (63.5 percent among TM enrollees), diabetes (26.5 percent among TM enrollees), and hypertension (66.3 percent among TM enrollees).<sup>43</sup> Similarly, the top 100 drugs by volume were often treatments for common conditions such as hypertension and hypercholesterolemia. (Table A3)

<sup>\*\*\*</sup> Including brand-name drugs, the top 20 drugs accounted for 1.04 billion 30-day equivalents.

While the majority (71.2 percent) of these drugs were filled for \$2 or less for a 30-day equivalent, there was nonetheless some variation both between and within drugs. For instance, metoprolol succinate was the least likely to be filled at \$2 or less (49.6 percent) while hydrochlorothiazide was the most likely (89.3 percent). Of the top 20 drugs, nine had average OOP greater than \$2. Even atorvastatin, a drug that has been available as a generic for over a decade, had over 20 percent of 30-day equivalents filled for more than \$2. (Table 4)

While rankings differed by plan type, the most commonly filled drugs were similar for EGWPs, PDPs, and MA-PD plans. Notably, and consistent with evidence in previous sections, EGWPs tended to have higher OOP burdens. Among non-LIS EGWP enrollees, 13 out of 20 drugs had more than half of their 30-day equivalents filled for more than \$2 (Tables A4-A6).

**Table 3. Average OOP Costs of Top 20 Prescription Drugs by Volume, Non-LIS, 2022**

Active Ingredient	30-Day Equivalents	% of 30-Day Equivalents					Average OOP	Examples of Condition(s) Treated
		<=\$2	\$2-\$5	\$5-\$10	\$10-\$20	>\$20		
<b>Total</b>	<b>708,350,639</b>	<b>71.2%</b>	<b>19.1%</b>	<b>7.5%</b>	<b>2.1%</b>	<b>0.1%</b>	<b>\$1.41</b>	
Atorvastatin Calcium	97,468,006	78.3%	15.6%	4.9%	1.2%	<0.1%	\$1.32	Hypercholesterolemia
Amlodipine Besylate	65,627,233	83.7%	12.6%	3.0%	0.7%	<0.1%	\$1.04	Hypertension
Lisinopril	53,449,406	84.4%	12.1%	2.9%	0.6%	<0.1%	\$0.97	Hypertension
Losartan Potassium	49,077,622	75.0%	18.2%	5.4%	1.3%	<0.1%	\$1.45	Hypertension
Metformin HCl	46,983,504	83.0%	13.1%	3.1%	0.7%	<0.1%	\$1.06	Diabetes
Metoprolol Succinate	42,578,596	49.6%	31.6%	14.9%	3.8%	<0.1%	\$3.08	Hypertension, Angina, Heart Failure
Rosuvastatin Calcium	36,203,975	60.7%	24.3%	10.6%	3.7%	<0.1%	\$2.71	Hypercholesterolemia
Omeprazole	34,589,726	59.3%	23.0%	14.2%	3.5%	<0.1%	\$2.62	Gastroesophageal reflux disease
Levothyroxine Sodium	31,339,492	63.9%	19.7%	12.5%	3.8%	<0.1%	\$2.40	Hypothyroidism
Hydrochlorothiazide	29,279,403	89.3%	9.1%	1.5%	0.1%	<0.1%	\$0.74	Hypertension, edema
Simvastatin	28,488,955	84.3%	11.7%	3.3%	0.7%	<0.1%	\$1.00	Hypercholesterolemia
Gabapentin	26,360,201	39.7%	29.2%	21.6%	8.1%	1.4%	\$4.64	Seizures, nerve pain
Tamsulosin HCl	26,115,684	46.4%	33.9%	15.2%	4.5%	<0.1%	\$3.26	Benign prostatic hyperplasia
Pantoprazole Sodium	25,844,011	52.3%	31.3%	12.4%	4.0%	<0.1%	\$2.91	Gastroesophageal reflux disease
Furosemide	24,340,816	79.6%	17.3%	2.8%	0.3%	<0.1%	\$1.16	Heart failure, edema
Metoprolol Tartrate	22,495,207	80.3%	15.3%	3.5%	0.8%	<0.1%	\$1.16	Hypertension, angina, heart Failure
Carvedilol	19,660,186	70.9%	21.9%	5.5%	1.7%	<0.1%	\$1.68	Heart failure, hypertension
Clopidogrel Bisulfate	17,100,209	55.3%	26.1%	13.7%	4.8%	<0.1%	\$2.91	Coronary artery disease, stroke prevention
Pravastatin Sodium	16,446,742	67.1%	20.9%	9.8%	2.1%	<0.1%	\$2.03	Hypercholesterolemia
Sertraline HCl	14,901,664	70.1%	20.7%	7.5%	1.7%	<0.1%	\$1.78	Depression, obsessive-compulsive disorder, posttraumatic stress disorder

**Note:** Restricted to generic formulations for non-LIS enrollees. Ranked by total generic 30-day equivalents. OOP: out-of-pocket cost. LIS: low-income subsidy.

## Utilization and OOP Spending for Most Commonly Used Drugs by LIS Status and Race/Ethnicity

The most commonly filled drugs by LIS enrollees were similar to those filled by non-LIS enrollees, all of which treat chronic conditions that are common in the Medicare population. Two drugs appear in the top 20 list for LIS enrollees that do not appear for non-LIS enrollees. These were montelukast, a treatment for asthma, and trazodone, a treatment for depression and insomnia. The two drugs that appear in the top 20 list for non-LIS but not for LIS were clopidogrel, a blood thinner, and pravastatin, a treatment for high cholesterol. (Table A2)

We further investigated variation in the most commonly filled drugs by race and ethnicity. While most drugs in the top 20 for all Part D enrollees were also in the top 20 for each racial and ethnic group, some were not. For instance, sertraline (a treatment for mental health conditions) was ranked 39 for Asian enrollees and 44 for Black enrollees. This may be partly a function of differential rates of diagnosis and lower rates of mental health access (potentially due to cultural differences and/or stigma) for these groups of enrollees, underscoring the importance of non-cost barriers to care.<sup>44</sup> Notably, no other selective serotonin reuptake inhibitors were among the most commonly filled drugs for Black or Asian enrollees (Table 4).

To investigate whether there were potentially burdensome OOP payments that varied by patient characteristics, we also calculated average OOP for 30-day equivalents by race and ethnicity. Our results suggested that there did not appear to be disproportionate OOP burden for enrollees of color for the most part. However, American Indian/Alaska Native enrollees tended to have higher OOP than other enrollees for a number of drugs including atorvastatin, amlodipine, gabapentin, and several other drugs (Table 4).

**Table 4. Representation and OOP for the 20 Most Utilized Generic Drugs by Race & Ethnicity, Non-LIS, 2022**

Drug	Overall		White		Asian		Black		Hispanic		American Indian/Alaska Native		Other	
	Rank	Average OOP	Rank	Average OOP	Rank	Average OOP	Rank	Average OOP	Rank	Average OOP	Rank	Average OOP	Rank	Average OOP
Atorvastatin Calcium	1	\$1.40	1	\$1.40	1	\$0.91	2	\$1.20	1	\$0.73	1	\$2.34	1	\$1.20
Amlodipine Besylate	2	\$1.11	2	\$1.11	2	\$0.74	1	\$0.91	3	\$0.63	3	\$1.67	2	\$0.92
Lisinopril	3	\$1.02	3	\$1.02	5	\$0.68	6	\$0.85	5	\$0.55	2	\$1.61	4	\$0.89
Losartan Potassium	4	\$1.56	4	\$1.56	4	\$0.97	4	\$1.30	4	\$0.74	5	\$2.71	5	\$1.32
Metformin HCl	5	\$1.14	5	\$1.14	3	\$0.80	3	\$0.92	2	\$0.63	4	\$2.53	3	\$1.04
Metoprolol Succinate	6	\$3.21	6	\$3.21	7	\$2.53	7	\$2.56	7	\$1.69	8	\$3.70	7	\$3.04
Rosuvastatin Calcium	7	\$2.90	7	\$2.90	6	\$1.88	8	\$1.87	6	\$1.27	9	\$6.24	6	\$2.79
Omeprazole	8	\$2.67	8	\$2.67	11	\$2.34	11	\$2.56	10	\$1.84	6	\$4.99	11	\$2.47
Levothyroxine Sodium	9	\$2.47	9	\$2.47	10	\$2.22	23	\$2.04	11	\$1.64	19	\$2.84	12	\$2.31
Hydrochlorothiazide	10	\$0.77	10	\$0.77	12	\$0.63	5	\$0.65	13	\$0.46	11	\$1.30	10	\$0.70
Simvastatin	11	\$1.07	11	\$1.07	8	\$0.68	15	\$0.88	9	\$0.46	12	\$2.44	9	\$0.91
Gabapentin	12	\$4.91	12	\$4.91	21	\$3.99	12	\$4.21	8	\$2.32	7	\$6.21	14	\$4.48
Tamsulosin HCl	13	\$3.42	13	\$3.42	9	\$2.70	14	\$2.75	12	\$1.96	14	\$3.08	8	\$3.34
Pantoprazole Sodium	14	\$3.05	14	\$3.05	15	\$2.42	13	\$2.25	14	\$1.62	13	\$4.69	13	\$2.89
Furosemide	15	\$1.20	15	\$1.20	25	\$0.98	10	\$1.02	18	\$0.68	10	\$1.80	18	\$1.05
Metoprolol Tartrate	16	\$1.21	16	\$1.21	17	\$0.84	16	\$1.04	17	\$0.70	17	\$1.77	15	\$1.02
Carvedilol	17	\$1.76	17	\$1.76	18	\$1.33	9	\$1.5	16	\$0.98	15	\$3.01	17	\$1.60
Clopidogrel Bisulfate	18	\$3.01	18	\$3.01	22	\$2.74	19	\$2.73	19	\$1.89	18	\$4.94	20	\$2.82

Pravastatin Sodium	19	19	\$2.12	20	\$1.76	17	\$1.62	23	\$1.31	24	\$2.92	19	\$1.99
Sertraline HCl	20	20	\$1.84	39	\$1.72	44	\$1.60	24	\$1.03	22	\$1.99	24	\$1.66

**Note:** Restricted to generic formulation and non-LIS enrollment. LIS: low-income subsidy. OOP: out-of-pocket cost. Asian includes Pacific Islanders.

In addition to understanding the average OOP cost for the most commonly filled drugs by race and ethnicity, it is helpful to measure the share of 30-day equivalents filled by non-LIS enrollees for less than \$2. As shown in Table 5, we found that for White enrollees, less than half of all 30-day equivalents for simvastatin and gabapentin were filled for \$2 or less. Distributions were similar for Asian and Black enrollees, and there were no drugs with fewer than half of 30-day equivalents filled for \$2 or less by Hispanic enrollees. As with OOP burden, we found that American Indian/Alaska Native enrollees filled fewer drugs for \$2 or less – seven out of the 20 most commonly filled drugs had fewer than half of 30-day equivalents filled for \$2 or less.

**Table 5. Share of 30-day Equivalents Filled for \$2 or Less, Top 20 Drugs, Non-LIS, by Race and Ethnicity**

Drug	White	Asian	Black	Hispanic	American Indian/Alaska Native	Other
Atorvastatin Calcium	82.7%	87.9%	85.0%	89.7%	70.9%	85.8%
Amlodipine Besylate	83.9%	88.3%	85.4%	91.0%	72.5%	85.9%
Lisinopril	73.5%	81.3%	76.5%	86.7%	59.0%	76.7%
Losartan Potassium	81.9%	86.6%	84.3%	89.5%	65.2%	83.3%
Metformin HCl	47.6%	55.3%	58.2%	71.5%	48.1%	48.8%
Metoprolol Succinate	58.2%	71.0%	70.4%	80.7%	51.2%	59.5%
Rosuvastatin Calcium	58.6%	59.7%	59.3%	69.4%	45.0%	60.8%
Omeprazole	63.3%	62.1%	66.2%	71.9%	57.6%	64.8%
Levothyroxine Sodium	89.0%	89.3%	89.6%	92.8%	73.9%	90.2%
Hydrochlorothiazide	83.3%	88.4%	85.8%	92.6%	67.9%	85.9%
Simvastatin	36.6%	43.6%	43.9%	67.5%	33.3%	39.6%
Gabapentin	44.3%	51.5%	53.1%	65.1%	49.7%	43.6%
Tamsulosin HCl	50.2%	57.3%	61.0%	71.8%	45.2%	51.4%
Pantoprazole Sodium	79.0%	81.6%	81.1%	87.4%	66.6%	81.8%
Furosemide	79.8%	84.0%	80.8%	87.0%	70.0%	82.5%
Metoprolol Tartrate	69.9%	75.6%	71.5%	81.9%	57.7%	72.5%
Carvedilol	53.8%	56.4%	58.4%	71.6%	44.4%	55.4%
Clopidogrel Bisulfate	65.9%	69.5%	72.6%	78.1%	61.3%	67.9%
Pravastatin Sodium	69.5%	68.0%	70.1%	80.5%	65.7%	72.1%
Sertraline HCl	55.7%	65.8%	62.5%	78.4%	49.1%	58.9%

**Note:** Restricted to generic formulations and non-LIS population. LIS: low-income subsidy. Asian includes Pacific Islanders.

We further explored variations in affordability of less commonly filled drugs by race and ethnicity. Our analysis found that in some instances, individuals from racial and ethnic groups that have been the focus of health equity concerns accounted for a disproportionate share of all 30-day equivalents of certain drugs. A number of these drugs had a particularly high OOP cost burden.

To identify potential affordability concerns even among prescriptions with relatively less utilization, but where the drug may still be a recommended treatment for common conditions, we focused on prescription drugs with more than 100,000 30-day equivalents supplied in total. We limited our results to at most three drugs and focused on the non-LIS population, for whom high OOP costs may be a significant burden. Our analysis identified several potential affordability concerns.

Black enrollees, for instance, accounted for a disproportionate share of 30-day equivalents for several commonly used anti-hypertension drugs:

- **Olmesartan:** Black enrollees filled 25.4 percent of 30-day equivalents with average OOP at \$7.42. Black enrollees filled 52.0 percent of 30-day equivalents for more than \$2 and 6.7 percent for more than \$20.
- **Nifedipine:** Black enrollees filled 23.0 percent of 30-day equivalents with average OOP at \$8.14. Black enrollees filled 71.9 percent of 30-day equivalents for more than \$2 and 7.0 percent of 30-day equivalents for more than \$20.
- **Amlodipine combined with olmesartan:** Black enrollees filled 21.1 percent of 30-day equivalents with average OOP at \$6.60. Black enrollees filled 51.6 percent of 30-day equivalents for more than \$2 and 9.3 percent of 30-day equivalents for more than \$20.

Asian enrollees accounted for a disproportionate share of two drugs for different conditions:

- **Acarbose:** A treatment for type 2 diabetes mellitus. Asian enrollees accounted for 11.3 percent of 30-day equivalents with average OOP at \$4.54. Asian enrollees filled 47.8 percent of 30-day equivalents for more than \$2 and 3.2 percent of 30-day equivalents for more than \$20.
- **Azelastine:** An anti-allergy treatment. Asian enrollees accounted for 11.3 percent of 30-day equivalents with average OOP at \$7.29. Asian enrollees filled 51.7 percent of 30-day equivalents for more than \$2 and 10.9 percent of 30-day equivalents for more than \$20.

Hispanic enrollees accounted for a disproportionate share of several drugs treating various conditions:

- **Galantamine:** A treatment for dementia. Hispanic enrollees accounted for 19.5 percent of 30-day equivalents with average OOP at \$4.71. Hispanic enrollees filled 18.3 percent of 30-day equivalents for more than \$2 and 7.9 percent of 30-day equivalents for more than \$20.
- **Clotrimazole with betamethasone:** An anti-fungal treatment. Hispanic enrollees accounted for 19.1 percent of 30-day equivalents with average OOP at \$5.99. Hispanic enrollees filled 31.9 percent of 30-day equivalents for more than \$2 and 7.3 percent of 30-day equivalents for more than \$20.
- **Diclofenac (Topical):** A treatment for arthritis. Hispanic enrollees filled 16.2 percent of 30-day equivalents with average OOP at \$8.95. Hispanic enrollees filled 48.5 percent of 30-day equivalents for more than \$2 and 9.3 percent of 30-day equivalents for more than \$20.

Lastly, American Indian/Alaska Native enrollees disproportionately filled a drug for opioid use disorder and chronic pain, buprenorphine, with average OOP at \$15.41. Nearly 90 percent of 30-day equivalents were for OOP more than \$2 and 14.8 percent were for OOP greater than \$20.

## Prescriptions Drugs with The Highest Average OOP

To identify commonly used drugs that have high OOP burden, we also examined the top 20 drugs when ranked by average OOP spending. Table 6 shows the distribution of OOP spending and the average OOP burden for 30-day equivalents of these drugs. We restricted this analysis to drugs with more than one million 30-day equivalents. We used a higher threshold than for the analysis in the previous section to ensure that these are widely used therapies across all enrollees. This list includes drugs used to treat other common conditions

including asthma, pain, and hypertension. Fewer than one-fifth of these drugs were filled for \$2 or less for a 30-day equivalent.

**Table 6. Top 20 Generic Drugs by Average OOP, Non-LIS, 2022**

Active Ingredient	30-Day Equivalents	% of 30-Day Equivalents					Average OOP	Examples of Condition(s) Treated
		≤\$2	\$2-\$5	\$5-\$10	\$10-\$20	>\$20		
<b>Total</b>	<b>40,318,730</b>	<b>17.7%</b>	<b>20.3%</b>	<b>22.5%</b>	<b>17.2%</b>	<b>22.3%</b>	<b>\$16.19</b>	
Fluticasone-Salmeterol	1,419,769	14.9%	16.3%	17.4%	7.6%	43.8%	\$24.60	Asthma, COPD
Ranolazine	1,015,786	11.5%	13.9%	18.8%	15.3%	40.5%	\$22.99	Angina
Doxycycline Hyclate	1,334,051	13.7%	22.8%	26.4%	18.0%	19.1%	\$22.44	Infections
Amoxicillin & Potassium Clavulanate	1,014,893	17.3%	33.3%	33.0%	16.0%	0.4%	\$20.92	Infections
Nebivolol HCl	1,425,961	11.2%	15.2%	20.4%	16.3%	37.0%	\$19.57	Hypertension
Oxycodone w/ Acetaminophen	2,250,695	9.9%	18.9%	21.1%	18.9%	31.2%	\$19.26	Moderate to severe pain
Estradiol (Vaginal)	2,360,451	13.7%	18.3%	22.5%	14.0%	31.5%	\$18.08	Vaginal symptoms of menopause
Valacyclovir HCl	1,363,148	15.8%	21.8%	20.9%	16.9%	24.7%	\$17.68	Shingles, cold sores, herpes
Hydrocodone-Acetaminophen	5,319,491	9.0%	19.9%	21.1%	23.9%	26.1%	\$17.13	Moderate to severe pain
Diclofenac Sodium (Topical)	1,144,705	21.6%	18.9%	22.7%	19.8%	17.1%	\$16.50	Arthritis
Albuterol Sulfate	2,578,604	22.6%	11.2%	24.7%	21.8%	19.8%	\$15.24	Asthma, COPD
Azithromycin	1,193,997	40.4%	30.7%	21.0%	7.6%	0.4%	\$15.02	Infections
Oxycodone HCl	1,730,232	12.1%	22.2%	24.9%	22.4%	18.3%	\$15.00	Moderate to severe pain
Aripiprazole	1,165,925	20.4%	22.7%	21.6%	22.5%	12.7%	\$14.66	Schizophrenia, bipolar disorder
Solifenacin Succinate	1,168,186	19.5%	21.4%	22.0%	12.6%	24.5%	\$14.42	Overactive bladder
Azelastine HCl	1,554,541	15.8%	19.5%	20.9%	20.3%	23.4%	\$13.90	Seasonal allergic rhinitis
Memantine HCl	4,004,173	23.2%	17.3%	23.9%	16.8%	18.9%	\$13.57	Dementia due to Alzheimer's Disease
Pregabalin	3,034,346	17.2%	22.3%	23.6%	16.2%	20.7%	\$12.75	Epilepsy, nerve pain
Celecoxib	3,767,271	21.9%	22.3%	21.9%	13.1%	20.8%	\$12.19	Mild-to-moderate pain
Cephalexin	1,472,505	37.9%	32.2%	22.2%	7.5%	0.2%	\$12.07	Infections

**Note:** Restricted to generic formulations, non-LIS, and drugs with 1,000,000 or more generic 30-day equivalents. OOP: out-of-pocket cost. LIS: low-income subsidy.

### Variation Among Drugs with Substantial Branded Share

While the majority of drugs in our analysis had very high generic dispensing rates, there were some drugs that had maintained a substantial brand share, even with the availability of generic substitutes. Many of the drugs with lower generic shares have similar OOP payments between the brand and generic versions. In some cases, the generic OOP is higher than that of the brand. Restricting the sample to drugs with 100,000 or more 30-day equivalents, we found that 48 unique drugs had a brand fill rate of more than 30 percent. For 17 of these drugs, the average OOP for the branded version was less than the average OOP for the generic version. In many cases, even if the generic OOP was less than the brand OOP, these differences were small. For instance, the average generic OOP for bepotastine, a treatment for conjunctivitis, was \$4.17 while the average brand OOP was \$4.36.

Notably, as shown in Table 7, certain commonly used therapies were among those with high brand share: albuterol sulfate (a first-line treatment for asthma), for instance, had a brand share of nearly 62.3 percent,



with an average generic OOP of \$7.66. Sucralfate, a treatment for duodenal ulcers had a brand share of 37.8 percent and average generic OOP of \$6.31.

Taken together, these results indicate the large variation in OOP costs and generic utilization even within drugs and the potential for the M2DL to save enrollees money and shift utilization from brand to generic formulations. Moreover, this underscores how formulary differences, as well as the role of patient assistance programs and advertising can lead to different utilization choices and can affect enrollee OOP in unexpected ways.

**Table 7. Volume and OOP of Drugs With Substantial Brand Share**

Drug	Brand Share	Average OOP		% 30-Day Equivalents <=\$2	
		Brand	Generic	Brand	Generic
Dexlansoprazole	99.7%	\$22.64	\$13.24	54.0%	56.8%
Tafluprost	99.5%	\$47.34	\$29.98	19.1%	26.9%
Trimethoprim	98.6%	\$5.46	\$6.11	37.6%	36.3%
Cyclosporine (Ophthalmic)	97.4%	\$31.86	\$20.80	43.2%	37.2%
Dabigatran Etxilate Mesylate	96.2%	\$46.73	\$43.08	20.4%	32.8%
Brimonidine Tartrate-Timolol Maleate	92.4%	\$26.20	\$23.00	35.7%	32.2%
Lenalidomide	90.5%	\$804.68	\$504.40	23.5%	28.1%
Roflumilast	89.7%	\$29.05	\$10.03	44.2%	62.3%
Icosapent Ethyl	76.0%	\$16.72	\$20.69	62.2%	47.0%
Fesoterodine Fumarate	74.7%	\$31.98	\$13.16	37.5%	44.4%
Brinzolamide	74.4%	\$25.83	\$20.73	38.5%	35.9%
Bepotastine Besilate	73.9%	\$4.36	\$4.17	83.2%	86.2%
Vilazodone HCl	69.3%	\$31.39	\$14.83	41.9%	53.4%
Medroxyprogesterone Acetate	65.8%	\$0.64	\$0.66	95.9%	96.1%
Sulfasalazine	63.4%	\$5.12	\$4.52	44.0%	47.4%
Albuterol Sulfate	62.3%	\$9.48	\$7.66	51.6%	55.1%
Amiloride HCl	61.6%	\$3.32	\$4.00	51.6%	42.6%
Fluticasone-Salmeterol	60.8%	\$25.10	\$16.91	42.4%	39.4%
Epinephrine (Anaphylaxis)	55.8%	\$31.12	\$34.91	42.3%	44.1%
Difluprednate	53.5%	\$33.31	\$26.73	31.5%	30.4%
Candesartan Cilexetil-Hydrochlorothiazide	53.2%	\$6.12	\$4.39	66.6%	72.7%
Levothyroxine Sodium	51.9%	\$3.59	\$1.88	68.8%	72.6%
Glatiramer Acetate	51.5%	\$214.98	\$212.90	44.3%	47.5%
Silver Sulfadiazine	48.4%	\$5.61	\$4.21	53.6%	64.1%
Buprenorphine	47.3%	\$37.39	\$36.46	40.1%	39.0%
Loteprednol Etabonate	47.0%	\$29.90	\$28.65	28.7%	28.2%
Lacosamide	45.9%	\$32.56	\$10.69	64.5%	73.2%
Tretinoin	45.2%	\$11.54	\$12.77	40.5%	45.3%
Naloxone HCl	44.9%	\$27.96	\$28.81	54.8%	50.8%
Diltiazem HCl Extended Release Beads	44.5%	\$5.44	\$5.22	42.8%	39.0%
Fluvoxamine Maleate	41.5%	\$4.31	\$6.80	72.0%	62.2%
Hydrocortisone	41.0%	\$6.37	\$8.31	51.7%	42.4%
Ciprofloxacin HCl (Ophthalmic)	40.7%	\$8.31	\$7.69	42.2%	42.7%



Atropine Sulfate (Ophthalmic)	40.1%	\$10.70	\$10.77	53.6%	49.0%
Benazepril & Hydrochlorothiazide	40.0%	\$2.49	\$2.54	69.5%	71.8%
Nitrofurantoin Macrocrystals	39.7%	\$13.93	\$13.02	35.0%	34.3%
Dimethyl Fumarate	38.8%	\$121.19	\$72.21	69.7%	50.5%
Colestipol HCl	38.6%	\$14.98	\$15.57	32.2%	33.8%
Nitrofurantoin Monohydrate Macrocrystals	38.4%	\$30.27	\$25.89	34.2%	33.1%
Sucralfate	37.8%	\$6.93	\$6.31	56.4%	60.7%
Azelastine HCl-Fluticasone Propionate	35.7%	\$23.35	\$19.92	24.4%	27.8%
Rivastigmine	35.2%	\$28.82	\$29.23	46.4%	42.3%
Cabergoline	34.9%	\$11.20	\$12.71	42.3%	41.0%
Cevimeline HCl	34.0%	\$23.42	\$21.15	33.0%	30.3%
Hydromorphone HCl	32.6%	\$5.66	\$9.02	51.1%	43.6%
Budesonide	32.5%	\$29.74	\$39.04	22.3%	25.2%
Pilocarpine HCl	30.7%	\$9.96	\$9.84	46.3%	37.5%
Calcium Acetate (Phosphate Binder)	30.5%	\$6.08	\$6.65	69.2%	64.1%

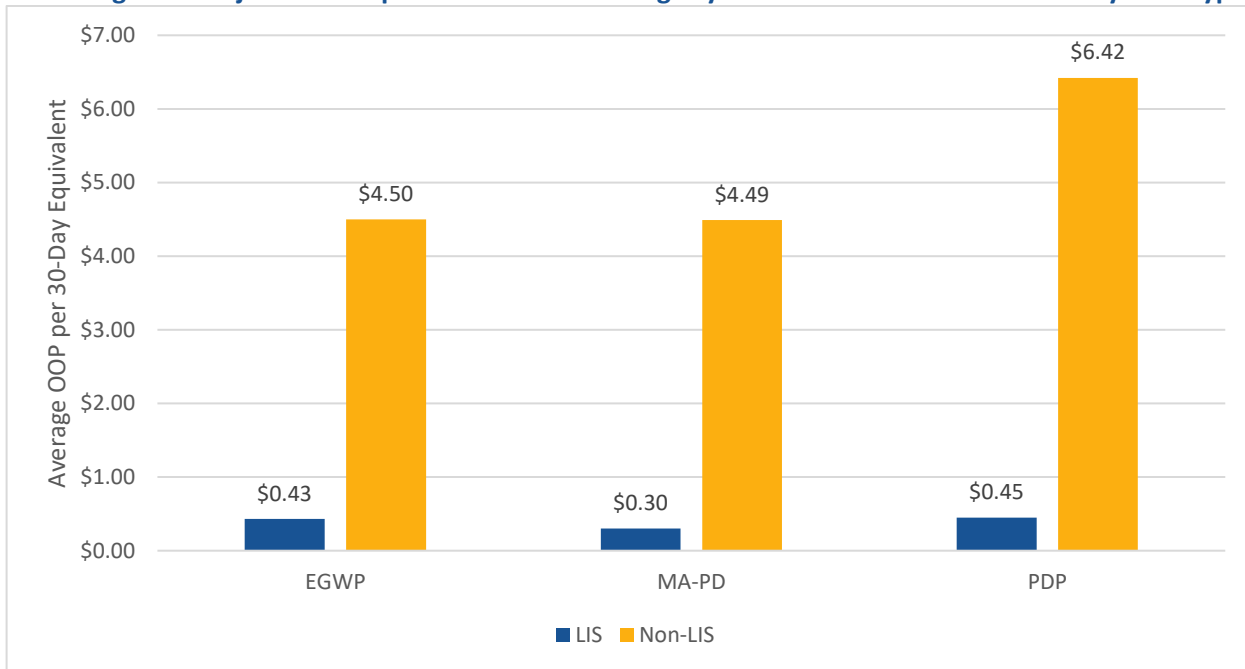
**Note:** Includes both brand and generic formulations. OOP: out-of-pocket cost.

### Adjusted Results: Plan Type, LIS, Rurality, and Pharmacy Type

In previous sections, we documented substantial variation in OOP costs for generic prescription drugs across a number of dimensions. We observed variation was due to differences in LIS status, drug mix, plan type, rurality, and the pharmacy type filling the drug. These differences were partly responsible for variation in OOP burdens by race and ethnicity. In this section, we present results that adjust for these factors.

After accounting for these factors, results on plan type changed somewhat. Non-LIS EGWP and MA-PD enrollees tended to face lower OOP per 30-day equivalent, while non-LIS PDP enrollees faced the highest (\$6.42) (Figure 5). This result suggests that OOP protections afforded by PDPs tend to be less generous than other plan types. LIS enrollees still faced very small OOP costs.

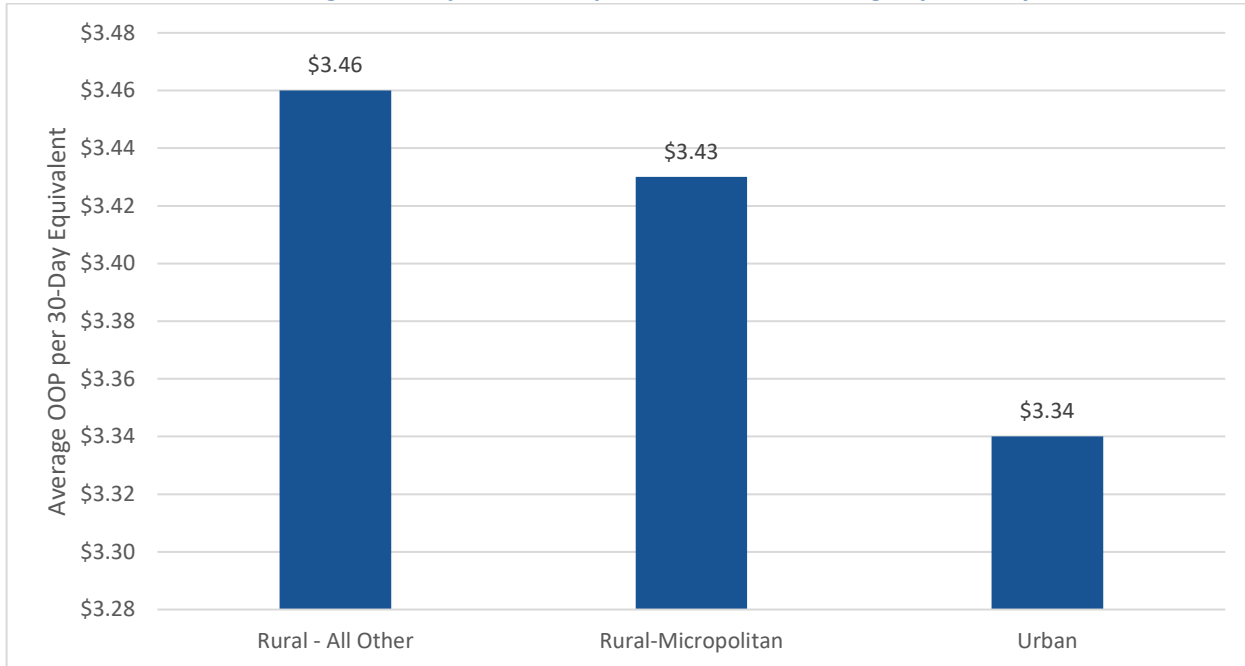
**Figure 5. Adjusted OOP per Fill for Generic Drugs by LIS and Non-LIS Enrollees and by Plan Type**



**Note:** Average OOP reflects average patient pay per 30-day equivalent. Restricted to generic formulations. Results from a linear regression with average OOP per 30-day equivalent as the outcome and controls for LIS indicator, plan type, pharmacy type, race and ethnicity, rurality, and interactions between LIS and each other variable. Regression included PEP fixed effects and was weighted by the number of fills. OOP: out-of-pocket cost. LIS: low-income subsidy. EGWP: Employer Group Waiver Plans. MA-PD: Medicare Advantage Prescription Drug Plans. PDP: Standalone Prescription Drug Plans. OOP: out-of-pocket cost. LIS: low-income subsidy.

Unlike the results on plan type, adjusted OOP levels by rurality were similar to the unadjusted results. While enrollees living in urban areas had less in OOP costs (\$3.34) than rural enrollees, these differences were small and consistent with unadjusted estimates (Figure 6).

**Figure 6. Adjusted OOP per Fill for Generic Drugs by Rurality**

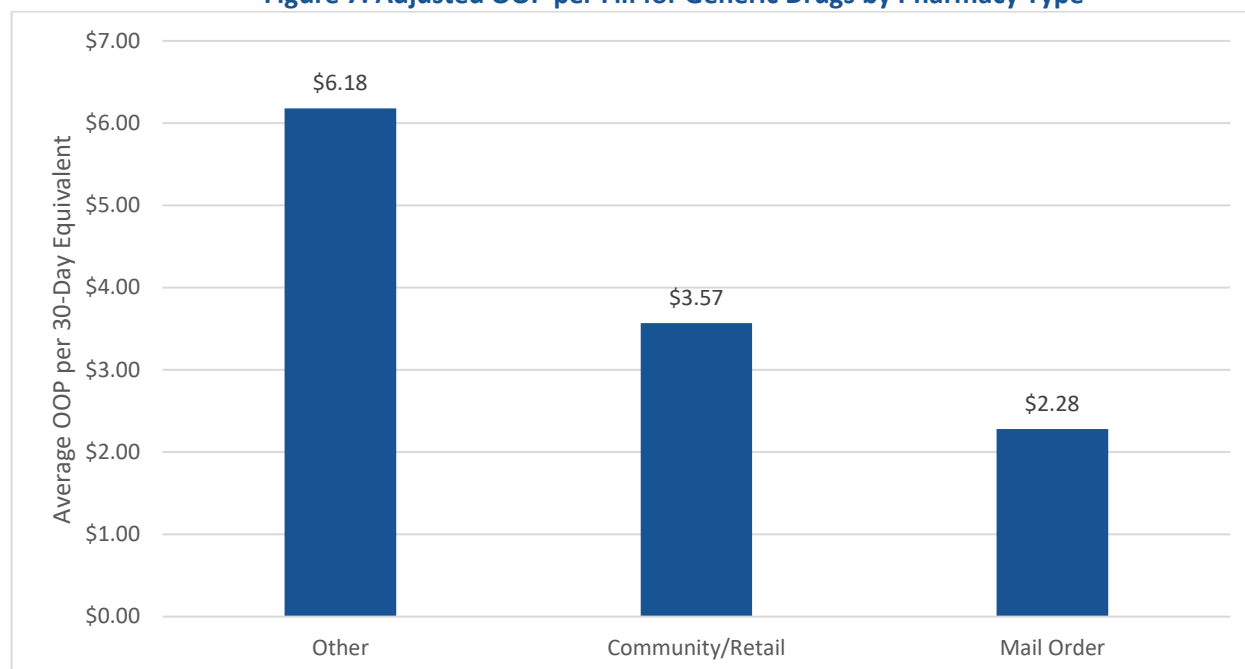


**Note:** Average OOP reflects average patient pay per 30-day equivalent. Restricted to generic formulations. Results from a linear regression with average OOP per 30-day equivalent as the outcome and controls for LIS indicator, plan type, pharmacy type, rurality, and interactions between LIS and each other variable. Regression included PEP fixed effects and was weighted by the number of fills. OOP: out-of-pocket cost. LIS: low-income subsidy.

Despite little evidence in difference in pharmacy use by rurality, our adjusted analysis estimated large differences in average OOP costs by pharmacy type. Mail order pharmacies had the lowest cost (\$2.28) as compared to retail pharmacies (\$3.57) and all other pharmacies (\$6.18) (Figure 7).<sup>§§§</sup>

<sup>§§§</sup> "All other pharmacies" includes institutional, long-term care, managed care organization, specialty, and any other pharmacies not categorized as mail order or retail. The vast majority of prescriptions are filled at retail pharmacies.

**Figure 7. Adjusted OOP per Fill for Generic Drugs by Pharmacy Type**



**Note:** Average OOP reflects average patient pay per 30-day equivalent. Restricted to generic formulations. Results from a linear regression with average OOP per 30-day equivalent as the outcome and controls for LIS indicator, plan type, pharmacy type, rurality, and interactions between LIS and each other variable. Regression included PEP fixed effects and was weighted by the number of fills. OOP: out-of-pocket cost. LIS: low-income subsidy. Missing pharmacy type is not presented.

To assess how changes in pharmacy utilization might change OOP burden, we estimated the same regression as used for Figure 7 and generated an overall estimate of adjusted OOP\*\*\*\* as well as an estimate of average OOP if all prescriptions were filled at mail order pharmacies. We multiplied the difference between these two numbers by the total number of 30-day equivalents filled at mail order pharmacies, assuming that use of these pharmacies doubles. Our estimate indicated that this would lead to a reduction of \$298.9 million in OOP costs, or roughly five percent of all OOP costs for generic drugs.

## CONCLUSION

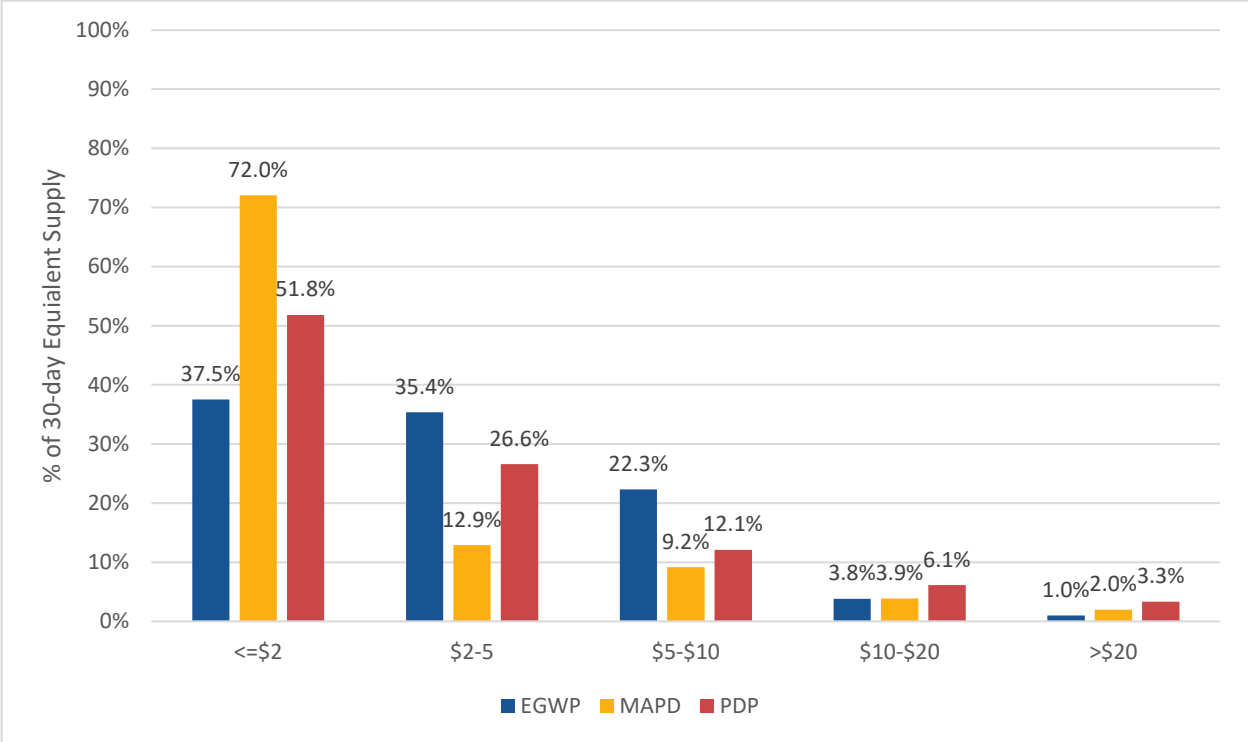
There is wide variation in the use and average OOP cost of generic drugs by Medicare Part D enrollees. While a most enrollees face very low costs, particularly among the LIS population, other enrollees face higher costs. Over 12 percent of Part D enrollees faced copayments over \$20 for a single fill of a generic drug. Even among some of the most commonly used generic drugs, fills for more than \$2 were common, and accounted for nearly half of some prescriptions. Our results show that a variety of factors, including plan type, region (rural versus non-rural), and pharmacy type, can affect OOP cost.

As implementation of the Inflation Reduction Act continues, more enrollees will benefit through reduced cost-sharing and improved access to prescription drugs. Our findings indicate that there may be substantial, additional cost-sharing burdens that can be alleviated with a more standardized formulary targeted at high-value, generic prescription drugs. The M2DL model could help enrollees access lower cost drugs irrespective of these factors, reducing potential confusion among enrollees and improving adherence to high-value therapies. These improvements could lead to increased beneficiary adherence to chronic care medications, improved clinical outcomes, and lower overall costs for Medicare. Additionally, greater transparency in OOP costs would benefit physicians when prescribing.

\*\*\*\* Stata's -margins- command was used to generate these predicted values.

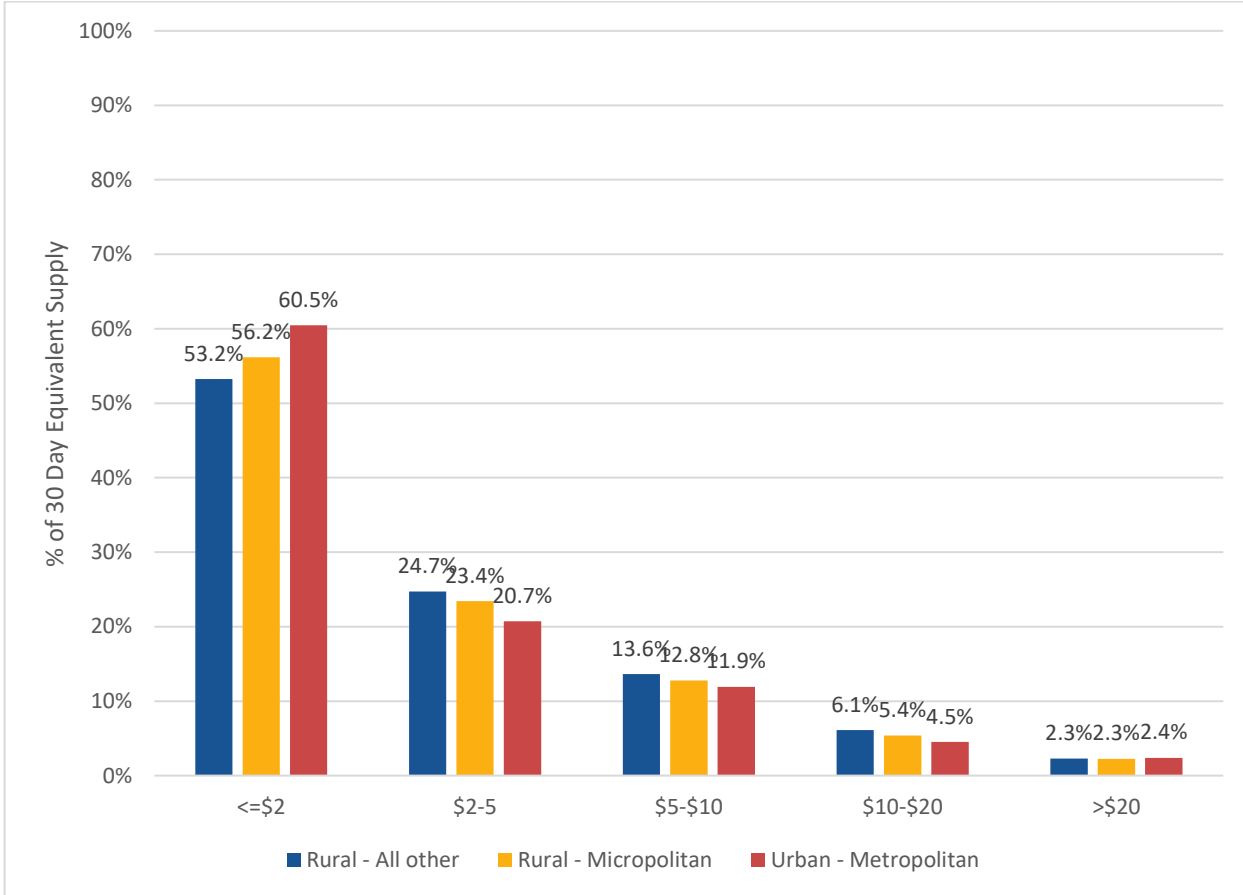
APPENDIX

Figure A1. Cost-Sharing Distributions for Generic Drugs by Plan Type, Non-LIS, 2022



**Note:** Percentages reflect the share of 30-day equivalents falling into each cost-sharing category. Restricted to generic formulations. EGWP: Employer Group Waiver Plans. MA-PD: Medicare Advantage Prescription Drug Plans. PDP: Standalone Prescription Drug Plans. LIS: low-income subsidy.

**Figure A2. Cost-Sharing Distributions for Generic Drugs by Rurality, Non-LIS, 2022**



**Note:** Percentages reflect the share of 30-day equivalents falling into each cost-sharing category. Restricted to generic formulations. Excludes areas that could not be classified. LIS: low-income subsidy.

**Table A1. Out-of-Pocket Payments by Plan Type, Copay Level, and LIS Status, 2022**

Copay Level	Plan Type	LIS Status	30-Day Equivalents	Total OOP / GDC	Mean OOP per 30-Day Equivalent	Annual OOP		Annual OOP / GDC	
						Mean	Median	Mean	Median
<= \$2	All	All	1,376,385,905	2.6%	\$0.35	\$12.38	\$1.82	18.9%	2.3%
		LIS	584,095,971	1.3%	\$0.32	\$15.83	\$3.64	5.3%	0.9%
		Non-LIS	792,289,934	6.1%	\$0.37	\$10.90	\$1.65	24.8%	5.2%
	EGWP	All	75,908,414	6.5%	\$0.90	\$19.14	\$9.24	40.4%	25.0%
		LIS	4,972,070	1.1%	\$0.32	\$14.79	\$0.00	4.7%	0.0%
		Non-LIS	70,936,344	7.4%	\$0.94	\$19.28	\$9.47	41.5%	25.0%
	MAPD	All	826,772,472	1.8%	\$0.22	\$8.75	\$0.00	10.8%	0.0%
		LIS	364,977,484	1.3%	\$0.24	\$12.50	\$0.00	4.6%	0.0%
		Non-LIS	461,794,989	3.2%	\$0.20	\$6.77	\$0.00	14.2%	0.0%
	PDP	All	473,705,018	3.0%	\$0.49	\$15.86	\$5.94	24.8%	9.1%
		LIS	214,146,418	1.4%	\$0.44	\$21.20	\$10.03	6.5%	2.5%
		Non-LIS	259,558,601	12.8%	\$0.53	\$13.54	\$4.75	32.8%	19.6%
> \$2	All	All	574,959,660	36.8%	\$9.08	\$182.82	\$90.91	60.2%	61.0%
		LIS	36,219,680	12.9%	\$5.09	\$58.70	\$27.65	30.1%	21.2%
		Non-LIS	538,739,980	39.5%	\$9.35	\$198.16	\$103.97	64.0%	65.9%
	EGWP	All	118,693,819	23.3%	\$6.55	\$185.61	\$125.88	46.1%	40.8%
		LIS	540,976	16.4%	\$6.01	\$89.63	\$39.50	31.4%	24.3%
		Non-LIS	118,152,843	23.4%	\$6.55	\$186.45	\$126.78	46.2%	41.0%
	MAPD	All	201,550,446	38.6%	\$9.75	\$148.11	\$70.00	60.2%	61.0%
		LIS	22,269,066	13.6%	\$5.08	\$53.99	\$25.79	29.9%	21.4%
		Non-LIS	179,281,381	43.4%	\$10.33	\$165.79	\$84.30	65.9%	68.3%
	PDP	All	254,715,394	43.0%	\$9.73	\$223.22	\$106.54	65.7%	69.5%
		LIS	13,409,638	11.9%	\$5.06	\$67.39	\$31.60	30.4%	20.8%
		Non-LIS	241,305,756	46.4%	\$9.99	\$238.76	\$119.52	69.2%	73.4%
> \$2 & <= \$5	All	All	316,152,309	29.0%	\$3.95	\$54.39	\$35.04	60.7%	60.7%
		LIS	33,228,797	10.9%	\$4.14	\$44.90	\$23.70	29.3%	20.7%
		Non-LIS	282,923,511	36.5%	\$3.93	\$55.85	\$36.52	65.5%	69.7%
	EGWP	All	67,287,366	22.8%	\$3.87	\$70.46	\$45.00	58.8%	53.3%
		LIS	396,656	12.7%	\$4.14	\$47.74	\$26.60	33.2%	24.1%
		Non-LIS	66,890,710	22.9%	\$3.87	\$70.68	\$45.00	59.1%	53.8%
	MAPD	All	103,143,194	25.7%	\$3.86	\$41.00	\$23.45	56.7%	52.3%
		LIS	20,412,658	11.6%	\$4.14	\$41.41	\$22.75	28.9%	20.7%
		Non-LIS	82,730,536	38.4%	\$3.79	\$40.89	\$23.62	64.2%	65.5%
	PDP	All	145,721,748	36.4%	\$4.06	\$61.75	\$45.39	65.4%	71.3%
		LIS	12,419,483	9.9%	\$4.15	\$51.99	\$27.65	29.9%	20.5%
		Non-LIS	133,302,266	48.9%	\$4.05	\$62.87	\$48.00	69.5%	77.6%
> \$5 & <= \$10	All	All	163,463,635	40.4%	\$8.24	\$86.37	\$51.05	68.4%	74.9%
		LIS	1,816,339	26.1%	\$8.24	\$55.05	\$32.00	49.8%	38.8%
		Non-LIS	161,647,297	40.7%	\$8.24	\$86.92	\$51.72	68.8%	75.4%
	EGWP	All	42,334,801	26.5%	\$7.87	\$126.27	\$80.00	56.0%	53.0%
		LIS	116,476	25.2%	\$8.44	\$102.10	\$58.43	48.8%	42.2%
		Non-LIS	42,218,325	26.5%	\$7.87	\$126.36	\$80.00	56.0%	53.1%
	MAPD	All	60,008,871	45.1%	\$8.40	\$69.00	\$39.27	70.4%	77.8%
		LIS	1,142,733	25.4%	\$8.18	\$49.11	\$29.00	49.4%	37.0%
		Non-LIS	58,866,137	45.8%	\$8.41	\$69.54	\$39.75	71.0%	78.6%
	PDP	All	61,119,964	53.3%	\$8.33	\$90.20	\$57.29	71.7%	82.2%
		LIS	557,129	28.0%	\$8.32	\$64.46	\$40.80	50.9%	43.4%
		Non-LIS	60,562,834	53.7%	\$8.33	\$90.53	\$57.62	71.9%	82.5%
> \$10 & <= \$20	All	All	63,637,240	48.2%	\$15.18	\$104.71	\$53.58	70.9%	80.5%
		LIS	823,906	32.8%	\$15.43	\$79.69	\$43.20	56.5%	58.0%
		Non-LIS	62,813,334	48.5%	\$15.18	\$105.15	\$53.88	71.2%	80.8%
	EGWP	All	7,195,272	26.7%	\$13.93	\$110.31	\$61.64	56.2%	52.8%
		LIS	22,082	25.6%	\$14.87	\$93.82	\$47.97	53.6%	50.0%
		Non-LIS	7,173,190	26.7%	\$13.93	\$110.38	\$61.64	56.2%	52.9%

	MAPD	All	> \$20						
			Volume	%	LIS	Non-LIS	MAPD	PDP	EGWP
		All	25,391,991	50.3%	\$15.19	\$84.06	\$43.11	73.2%	83.0%
		LIS	490,981	30.5%	\$15.27	\$67.11	\$38.28	56.7%	57.8%
		Non-LIS	24,901,011	50.9%	\$15.19	\$84.48	\$43.35	73.6%	83.5%
	PDP	All	31,049,976	55.7%	\$15.46	\$128.76	\$66.23	71.6%	83.4%
		LIS	310,843	38.0%	\$15.72	\$110.28	\$59.89	56.4%	59.4%
		Non-LIS	30,739,133	56.0%	\$15.45	\$128.99	\$66.34	71.8%	83.6%
> \$20	All	All	31,706,476	36.5%	\$52.30	\$255.99	\$126.62	71.1%	79.4%
		LIS	350,638	28.7%	\$54.17	\$191.13	\$97.00	59.3%	60.6%
		Non-LIS	31,355,838	36.6%	\$52.28	\$257.00	\$127.00	71.3%	79.7%
	EGWP	All	1,876,380	15.1%	\$44.46	\$207.63	\$108.00	46.5%	35.0%
		LIS	5,762	17.5%	\$52.08	\$166.51	\$87.82	46.2%	33.0%
		Non-LIS	1,870,618	15.1%	\$44.44	\$207.81	\$108.16	46.5%	35.0%
	MAPD	All	13,006,390	40.7%	\$52.01	\$217.55	\$100.00	77.1%	95.7%
		LIS	222,693	29.3%	\$53.08	\$171.78	\$90.00	62.1%	69.9%
		Non-LIS	12,783,697	41.0%	\$51.99	\$218.59	\$100.00	77.4%	96.1%
	PDP	All	16,823,706	38.7%	\$53.39	\$302.83	\$158.40	68.2%	69.8%
		LIS	122,183	28.4%	\$56.24	\$238.99	\$131.33	53.3%	50.0%
		Non-LIS	16,701,523	38.8%	\$53.37	\$303.45	\$158.86	68.4%	70.0%

**Note:** Restricted to generic formulations only. EGWP: Employer Group Waiver Plans. MA-PD: Medicare Advantage Prescription Drug Plans. PDP: Standalone Prescription Drug Plans. LIS: low-income subsidy. OOP: out-of-pocket cost. GDC: gross drug costs.

**Table A2. Top 20 Drugs by Volume, LIS, 2022**

Active Ingredient	% 30-Day Equivalent <= \$2	Average OOP
Atorvastatin Calcium	98.3%	\$0.29
Amlodipine Besylate	98.5%	\$0.28
Metformin HCl	98.5%	\$0.27
Lisinopril	98.4%	\$0.28
Gabapentin	89.4%	\$0.78
Omeprazole	96.6%	\$0.47
Losartan Potassium	98.2%	\$0.30
Furosemide	97.6%	\$0.31
Metoprolol Succinate	96.5%	\$0.49
Pantoprazole Sodium	96.2%	\$0.45
Levothyroxine Sodium	97.1%	\$0.40
Rosuvastatin Calcium	97.9%	\$0.36
Trazodone HCl	95.2%	\$0.46
Metoprolol Tartrate	97.8%	\$0.31
Carvedilol	97.2%	\$0.37
Hydrochlorothiazide	98.6%	\$0.27
Tamsulosin HCl	96.2%	\$0.48
Simvastatin	98.7%	\$0.27
Sertraline HCl	96.5%	\$0.37
Montelukast Sodium	96.9%	\$0.40

**Note:** Restricted to generic formulations. LIS: low-income subsidy. OOP: out-of-pocket costs.



**Table A3. Top 100 Drugs by Volume and Indications, 2022**

Active Ingredient	Examples of Condition(s) Treated
Albuterol Sulfate	Asthma, chronic obstructive pulmonary disease
Alendronate Sodium	Osteoporosis
Allopurinol	Gout and kidney stones.
Alprazolam	Anxiety disorder, panic disorder
Amiodarone HCl	Irregular heartbeat
Amitriptyline HCl	Depression
Amlodipine Besylate	Hypertension
Atenolol	Hypertension
Atorvastatin Calcium	Hypercholesterolemia
Baclofen	Pain due to multiple sclerosis, spinal cord injury
Benazepril HCl	Hypertension
Bupropion HCl	Depression, smoking cessation, seasonal affective disorder
Bupirone HCl	Generalized anxiety disorder
Carbidopa-Levodopa	Parkinson's disease
Carvedilol	Heart failure, hypertension
Celecoxib	Pain, arthritis
Chlorthalidone	Hypertension, edema
Citalopram Hydrobromide	Depression
Clonazepam	Panic disorder, epilepsy
Clonidine HCl	Hypertension
Clopidogrel Bisulfate	Coronary artery disease, stroke prevention
Cyclobenzaprine HCl	Muscle spasms
Diltiazem HCl Coated Beads	High blood pressure, angina
Divalproex Sodium	Seizures
Donepezil Hydrochloride	Alzheimer's Disease
Dorzolamide HCl-Timolol Maleate	Glaucoma
Doxazosin Mesylate	Benign prostatic hyperplasia, hypertension
Duloxetine HCl	Depression, anxiety, nerve pain
Enalapril Maleate	Hypertension
Escitalopram Oxalate	Depression, anxiety
Esomeprazole Magnesium	Ulcers, erosive esophagitis, gastroesophageal reflux disease
Ezetimibe	Hypercholesterolemia
Famotidine	Ulcers, gastroesophageal reflux disease
Fenofibrate	Hypercholesterolemia, high triglycerides
Finasteride	Benign prostate hyperplasia, androgenic alopecia
Fluoxetine HCl	Depression, panic attacks, obsessive compulsive disorder
Fluticasone Propionate (Nasal)	Nonallergic rhinitis
Furosemide	Heart failure, edema
Gabapentin	Seizures, nerve pain
Glimepiride	Diabetes
Glipizide	Diabetes
Hydralazine HCl	Hypertension
Hydrochlorothiazide	Hypertension, edema
Hydrocodone-Acetaminophen	Pain
Hydroxychloroquine Sulfate	Malaria, rheumatoid arthritis
Ibuprofen	Pain
Irbesartan	Hypertension
Isosorbide Mononitrate	Chest pain, heart failure
Lamotrigine	Seizures, bipolar disorder
Latanoprost	Glaucoma
Levetiracetam	Seizures
Levothyroxine Sodium	Hypothyroidism
Lisinopril	Hypertension, heart failure
Lisinopril & Hydrochlorothiazide	Hypertension
Lorazepam	Seizure disorders

Losartan Potassium	Hypertension
Losartan Potassium & Hydrochlorothiazide	Hypertension
Lovastatin	Hypercholesterolemia
Meloxicam	Pain, arthritis
Memantine HCl	Dementia, Alzheimer's Disease
Metformin HCl	Diabetes
Metoprolol Succinate	Hypertension, angina, heart failure
Metoprolol Tartrate	Hypertension, Angina, Heart Failure
Mirtazapine	Major depressive disorder
Montelukast Sodium	Asthma
Nifedipine	Hypertension, angina
Olmesartan Medoxomil	Hypertension
Omeprazole	Gastroesophageal reflux disease
Oxybutynin Chloride	Urinary urgency
Oxycodone HCl	Pain
Oxycodone w/ Acetaminophen	Pain
Pantoprazole Sodium	Gastroesophageal reflux disease
Paroxetine HCl	Depression, panic attacks, obsessive compulsive disorder, anxiety disorders
Pioglitazone HCl	Diabetes
Potassium Chloride	Potassium supplementation
Potassium Chloride Microencapsulated Crystals	Potassium supplementation
Pravastatin Sodium	Hypercholesterolemia
Prednisone	Anti-inflammatory steroid
Pregabalin	Seizures, nerve pain, fibromyalgia
Propranolol HCl	Tremors, angina, hypertension, heart rhythm disorders
Quetiapine Fumarate	Schizophrenia, bipolar disorder, and depression
Ropinirole Hydrochloride	Parkinson's disease
Rosuvastatin Calcium	Hypercholesterolemia
Sertraline HCl	Depression, obsessive-compulsive disorder, posttraumatic stress disorder
Simvastatin	Hypercholesterolemia
Spironolactone	Hypertension, edema
Tamsulosin HCl	Benign prostatic hyperplasia
Timolol Maleate (Ophthalmic)	Glaucoma
Tizanidine HCl	Muscle spasms due to multiple sclerosis
Topiramate	Epilepsy, migraines
Torsemide	Edema
Tramadol HCl	Pain
Trazodone HCl	Depression and insomnia
Triamcinolone Acetonide (Topical)	Eczema, dermatitis, allergies, rash
Triamterene & Hydrochlorothiazide	Hypertension, edema
Valsartan	Hypertension, heart failure
Venlafaxine HCl	Major depressive disorder, anxiety, and panic disorder
Warfarin Sodium	Blood clots
Zolpidem Tartrate	Insomnia

**Note:** Restricted to generic formulations.

**Table A4. Top 20 Drugs by Volume, Non-LIS, EGWP, 2022**

Active Ingredient	Generic 30-Day Equivalents	Mean Generic OOP	% Fills >\$2
Atorvastatin Calcium	11,486,921	\$3.10	55.8%
Amlodipine Besylate	7,542,593	\$2.07	36.5%
Metoprolol Succinate	6,430,247	\$4.15	67.5%
Metformin HCL	6,010,616	\$2.60	47.5%
Losartan Potassium	5,766,899	\$3.40	62.2%
Lisinopril	5,299,405	\$2.15	39.2%
Rosuvastatin Calcium	5,282,480	\$3.68	60.2%
Omeprazole	4,210,408	\$3.86	65.8%
Furosemide	3,957,820	\$2.02	38.1%
Pantoprazole Sodium	3,684,181	\$4.07	70.8%
Gabapentin	3,672,579	\$4.30	67.6%
Levothyroxine Sodium	3,619,449	\$4.20	73.6%
Tamsulosin HCl	3,549,538	\$4.12	68.0%
Hydrochlorothiazide	3,179,135	\$1.55	26.1%
Simvastatin	3,084,964	\$2.23	41.2%
Metoprolol Tartrate	2,785,463	\$2.30	42.6%
Carvedilol	2,714,159	\$2.98	56.7%
Montelukast Sodium	2,540,505	\$3.91	65.0%
Clopidogrel Bisulfate	2,267,828	\$3.85	64.1%
Allopurinol	2,014,321	\$3.28	60.4%

**Note:** Restricted to generic formulations and non-LIS enrollees. LIS: low-income subsidy. OOP: out-of-pocket costs. EGWP: Employer Group Waiver Plans.

**Table A5. Top 20 Drugs by Volume, Non-LIS, MA-PD, 2022**

Active Ingredient	Generic 30-Day Equivalents	Mean Generic OOP	% Fills >\$2
Atorvastatin Calcium	48,376,551	\$0.67	12.0%
Amlodipine Besylate	32,583,496	\$0.55	8.3%
Lisinopril	28,051,724	\$0.46	7.1%
Metformin HCl	24,580,456	\$0.49	7.9%
Losartan Potassium	23,919,251	\$0.61	11.4%
Metoprolol Succinate	18,582,829	\$1.69	27.2%
Rosuvastatin Calcium	16,991,014	\$0.77	12.9%
Omeprazole	16,694,235	\$1.96	31.6%
Levothyroxine Sodium	14,799,723	\$1.52	26.0%
Simvastatin	14,466,847	\$0.43	6.3%
Hydrochlorothiazide	14,273,918	\$0.45	6.8%
Gabapentin	13,189,292	\$4.21	50.4%
Tamsulosin HCl	12,734,673	\$1.84	32.5%
Pantoprazole Sodium	11,802,997	\$1.26	23.3%
Metoprolol Tartrate	10,950,423	\$0.66	12.0%
Furosemide	10,852,750	\$0.65	11.1%
Carvedilol	9,299,698	\$0.80	15.8%
Clopidogrel Bisulfate	8,153,639	\$2.25	32.8%
Pravastatin Sodium	7,920,209	\$0.87	14.9%
Sertraline HCl	7,066,957	\$1.13	21.8%

**Note:** Restricted to generic formulations and non-LIS enrollees. LIS: low-income subsidy. OOP: out-of-pocket costs. MA-PD: Medicare Advantage Prescription Drug Plans.

**Table A6. Top 20 Drugs by Volume, Non-LIS, PDP, 2022**

Active Ingredient	Generic 30-Day Equivalents	Mean Generic OOP	% Fills >\$2
Atorvastatin Calcium	37,604,534	\$1.61	23.7%
Amlodipine Besylate	25,501,144	\$1.37	20.6%
Lisinopril	20,098,277	\$1.36	21.2%
Losartan Potassium	19,391,472	\$1.91	30.5%
Metoprolol Succinate	17,565,519	\$4.15	68.6%
Metformin HCl	16,392,432	\$1.35	19.4%
Rosuvastatin Calcium	13,930,481	\$4.72	63.6%
Omeprazole	13,685,083	\$3.03	44.1%
Levothyroxine Sodium	12,920,319	\$2.90	37.1%
Hydrochlorothiazide	11,826,351	\$0.87	11.3%
Simvastatin	10,937,144	\$1.41	20.9%
Pantoprazole Sodium	10,356,833	\$4.37	67.2%
Tamsulosin HCl	9,831,473	\$4.79	75.7%
Furosemide	9,530,245	\$1.39	23.5%
Gabapentin	9,498,331	\$5.37	71.3%
Metoprolol Tartrate	8,759,321	\$1.43	22.0%
Carvedilol	7,646,329	\$2.28	35.4%
Clopidogrel Bisulfate	6,678,742	\$3.40	52.7%
Pravastatin Sodium	6,532,924	\$3.05	47.7%
Sertraline HCl	5,988,497	\$2.12	30.4%

**Note:** Restricted to generic formulations and non-LIS enrollees. LIS: low-income subsidy. OOP: out-of-pocket costs. PDP: Standalone Prescription Drug plans.

**Table A7. Representation and OOP for the 20 Most Utilized Generic Drugs by Race & Ethnicity, Overall, 2022**

Drug	Overall		White		Asian		Black		Hispanic		American Indian/Alaska Native		Other	
	Rank	Average OOP	Rank	Average OOP	Rank	Average OOP	Rank	Average OOP	Rank	Average OOP	Rank	Average OOP	Rank	Average OOP
Atorvastatin Calcium	1	\$0.97	1	\$1.20	1	\$0.58	2	\$0.71	1	\$0.46	1	\$1.26	1	\$0.96
Amlodipine Besylate	2	\$1.20	2	\$0.98	2	\$0.47	1	\$0.58	3	\$0.42	4	\$1.08	2	\$0.74
Lisinopril	3	\$1.28	3	\$0.87	6	\$0.48	5	\$0.51	4	\$0.37	2	\$0.98	4	\$0.74
Metformin HCl	4	\$1.23	5	\$0.96	3	\$0.53	3	\$0.58	2	\$0.41	3	\$1.36	3	\$0.80
Losartan Potassium	5	\$0.86	4	\$1.38	4	\$0.60	4	\$0.80	5	\$0.49	6	\$1.69	5	\$1.04
Metoprolol Succinate	6	\$0.41	6	\$2.76	5	\$1.39	8	\$1.52	8	\$1.04	9	\$2.13	6	\$2.40
Omeprazole	7	\$0.53	7	\$2.12	10	\$1.10	11	\$1.26	6	\$0.95	7	\$2.41	8	\$1.75
Rosuvastatin Calcium	8	\$0.46	8	\$2.52	7	\$1.21	13	\$1.16	9	\$0.78	11	\$3.67	7	\$2.29
Gabapentin	9	\$0.33	10	\$3.57	13	\$1.66	7	\$1.90	7	\$1.31	5	\$2.63	13	\$2.88
Levothyroxine Sodium	10	\$0.53	9	\$2.04	11	\$1.42	24	\$1.18	10	\$0.98	19	\$1.48	12	\$1.82
Pantoprazole Sodium	11	\$0.48	11	\$2.38	14	\$1.26	12	\$1.13	12	\$0.90	10	\$2.31	14	\$2.06
Hydrochlorothiazide	12	\$1.59	13	\$0.71	16	\$0.45	6	\$0.45	13	\$0.32	13	\$0.93	10	\$0.58
Furosemide	13	\$1.16	12	\$0.96	22	\$0.54	9	\$0.58	15	\$0.42	8	\$1.03	17	\$0.77
Simvastatin	14	\$1.19	14	\$0.96	9	\$0.45	16	\$0.59	11	\$0.34	12	\$1.49	11	\$0.76
Tamsulosin HCl	15	\$0.39	15	\$2.94	8	\$1.46	15	\$1.69	14	\$1.23	15	\$1.88	9	\$2.68
Metoprolol Tartrate	16	\$1.09	16	\$1.02	18	\$0.53	14	\$0.62	18	\$0.44	20	\$1.07	15	\$0.80
Carvedilol	17	\$0.79	17	\$1.47	17	\$0.75	10	\$0.84	16	\$0.59	14	\$1.65	16	\$1.19
Clopidogrel Bisulfate	18	\$0.46	20	\$2.44	19	\$1.34	17	\$1.41	21	\$1.08	21	\$2.56	19	\$2.06
Trazodone HCl	19	\$0.66	19	\$1.70	32	\$0.86	27	\$0.78	23	\$0.66	17	\$1.40	23	\$1.54
Sertraline HCl	20	\$0.77	18	\$1.43	36	\$0.88	37	\$0.72	24	\$0.59	22	\$0.99	22	\$1.16

**Note:** Restricted to generic formulation. Includes LIS and non-LIS. LIS: low-income subsidy. OOP: out-of-pocket cost.

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