Research Letter
Patient-Level Savings on Generic Drugs Through the Mark Cuban Cost Plus Drug Company

Ramez Kouzy, MD; Molly B. El Alam, MPH; Kelsey L. Corrigan, MD, MPH; Hussain S. Lalani, MD, MPH, MSc; Ethan B. Ludmir, MD

Introduction
In 2022, the Mark Cuban Cost Plus Drug Company (MCCPDC) started selling generic prescription drugs through a transparent, online direct-to-consumer pharmacy model. While potential Medicare Part D plan savings achieved by using MCCPDC have been estimated at over $3 billion for a subset of 77 generic drugs, individual patient-level savings have not been quantified, to our knowledge. We estimated the out-of-pocket cost savings patients could achieve if they purchased drugs directly from MCCPDC instead of using their health insurance.

Methods
This economic evaluation used the 2019 Medical Expenditure Panel Survey (MEPS), a publicly available, nationally representative survey of individuals and families. We matched generic medicines sold online by MCCPDC in March 2023 to prescriptions filled in MEPS using codes from the National Drug Code Directory, drug name, strength, and quantity. We focused on tablets and capsules in 30- and 90-pill quantities and identified 124 generic drugs for the analysis (eAppendix in Supplement 1). Race and ethnicity data were not collected because this study focused on the insurance status of individuals rather than their demographic composition. We followed the CHEERS reporting guideline. This study did not require institutional review based on the criteria of the Common Rule (45 CFR §46) because it used publicly accessible, deidentified data.

To account for potential differences in drug costs from 2019 to 2023, we adjusted out-of-pocket costs in MEPS using the drug-specific percentage change in the National Average Drug Acquisition Cost. We limited out-of-pocket costs for prescriptions with savings varied by health insurance: Medicare, 5.5% (14 987 248 of 272 381 168 fills); private, 7.1% (14 679 121 of 207 387 159); military, 9.9% (2 378 664 of 3 993 897); and uninsured, 28.9% (5 000 260 of 12 220 292) (Figure). Median (IQR) estimated cost savings per prescription was $4.96 ($1.95-$11.39); savings were highest for uninsured individuals: $6.08 ($1.87-$10.38). Median (IQR) savings per filled prescription was $5.05 ($2.59-$7.66) for military insurance, $4.64 ($1.89-$10.19) for Medicare, and $3.69 ($1.77-$8.99) for private insurance. Among fills with cost savings, 50.3% had savings less than $5, while 28.4% had savings greater than $10. A sample of generic drugs with savings is presented in the Table.

Results
This study identified potential out-of-pocket cost savings in 99 696 682 of 843 713 380 weighted prescription pharmacy fills (11.8%) among 124 generic drugs. No cost savings were observed among patients with Medicaid insurance; percentage of filled prescriptions with savings varied by health insurance: Medicare, 5.5% (14 987 248 of 272 381 168 fills); private, 7.1% (14 679 121 of 207 387 159); military, 9.9% (2 378 664 of 3 993 897); and uninsured, 28.9% (5 000 260 of 12 220 292) (Figure). Median (IQR) estimated cost savings per prescription was $4.96 ($1.95-$11.39); savings were highest for uninsured individuals: $6.08 ($1.87-$10.38). Median (IQR) savings per filled prescription was $5.05 ($2.59-$7.66) for military insurance, $4.64 ($1.89-$10.19) for Medicare, and $3.69 ($1.77-$8.99) for private insurance. Among fills with cost savings, 50.3% had savings less than $5, while 28.4% had savings greater than $10. A sample of generic drugs with savings is presented in the Table.

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Discussion

This economic evaluation found that patients could have spent less on 11.8% of prescriptions filled for 124 generic drugs in 2019 if they had been purchased from MCCPDC instead of using their health insurance. The estimated cost savings was approximately $5 per prescription, including shipping.

Figure. Estimated Cost Savings for Prescription Drugs Among Patients With Any Savings Using Mark Cuban Cost Plus Drug Company

Among the 12% of generic prescription fills with savings, we did not observe any cost savings for patients with Medicaid health insurance. We estimated the potential out-of-pocket cost savings for individuals based on their health insurance type in 2019. Of all prescription fills, 5.5% of fills for individuals with Medicare insurance; 9.9%, with military insurance (Veterans Administration or TRICARE); 7.1%, with private insurance; and 28.9%, with no insurance had savings.

Table. Out-of-Pocket Cost Savings for Select Generic Prescription Drugs Among Beneficiaries With Any Savings

<table>
<thead>
<tr>
<th>Drug*</th>
<th>Prescriptions (weighted), No.a</th>
<th>Proportion of prescriptions with savings, % (95% CI)</th>
<th>Cost savings by insurance type, median (IQR), 2023 $b</th>
<th>Medicare</th>
<th>Military</th>
<th>Private</th>
<th>Uninsured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atorvastatin</td>
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<tr>
<td>30 Pills</td>
<td>35,118,775</td>
<td>7.91 (7.00-8.82)</td>
<td>15.14 (15.00-17.74)</td>
<td>0</td>
<td>4.06</td>
<td>2.93-4.72</td>
<td>8.74 (1.86-8.74)</td>
</tr>
<tr>
<td>90 Pills</td>
<td>51,836,694</td>
<td>12.59 (11.66-13.51)</td>
<td>4.10 (2.94-6.07)</td>
<td>3.90 (3.90-3.90)</td>
<td>1.89</td>
<td>0.44-4.57</td>
<td>6.07 (1.47-7.55)</td>
</tr>
<tr>
<td>Amlodipine</td>
<td></td>
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<tr>
<td>90 Pills</td>
<td>38,911,361</td>
<td>13.34 (12.27-14.40)</td>
<td>1.97 (1.54-2.94)</td>
<td>5.05 (5.05-5.16)</td>
<td>3.79</td>
<td>2.94-6.03</td>
<td>97.24 (0.10-97.24)</td>
</tr>
<tr>
<td>Losartan</td>
<td></td>
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<tr>
<td>30 Pills</td>
<td>16,284,558</td>
<td>18.28 (16.34-20.22)</td>
<td>3.4 (3.4-9.07)</td>
<td>4.58 (4.58-4.58)</td>
<td>3.4</td>
<td>2.11-3.4</td>
<td>10.14 (10.14-10.14)</td>
</tr>
<tr>
<td>90 Pills</td>
<td>28,837,171</td>
<td>21.81 (20.28-23.34)</td>
<td>5.61 (1.89-6.73)</td>
<td>5.94 (0.36-5.94)</td>
<td>2.35</td>
<td>1.92-6.70</td>
<td>6.78 (3.05-21.83)</td>
</tr>
<tr>
<td>Fluoxetine</td>
<td></td>
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<tr>
<td>30 Pills</td>
<td>23,490,172</td>
<td>5.85 (4.80-6.90)</td>
<td>0.55 (0.55-0.55)</td>
<td>0</td>
<td>5.43</td>
<td>0.55-5.43</td>
<td>0</td>
</tr>
<tr>
<td>90 Pills</td>
<td>11,755,483</td>
<td>10.81 (8.90-12.72)</td>
<td>0.92 (0.25-17.66)</td>
<td>3.03 (3.03-3.03)</td>
<td>5.95</td>
<td>3.03-17.66</td>
<td>20.62 (20.62-20.62)</td>
</tr>
<tr>
<td>Simvastatin</td>
<td></td>
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<tr>
<td>30 Pills</td>
<td>10,956,492</td>
<td>13.30 (11.19-15.40)</td>
<td>0.37 (0.37-0.37)</td>
<td>0</td>
<td>4.20</td>
<td>2.74-4.20</td>
<td>1.46 (1.46-1.46)</td>
</tr>
<tr>
<td>90 Pills</td>
<td>22,689,787</td>
<td>21.09 (19.38-22.79)</td>
<td>3.62 (1.60-8.50)</td>
<td>6.76 (6.76-6.76)</td>
<td>1.80</td>
<td>0.94-4.42</td>
<td>1.80 (1.80-1.80)</td>
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<tr>
<td>Rosuvastatin</td>
<td></td>
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<tr>
<td>30 Pills</td>
<td>8,917,136</td>
<td>14.80 (12.36-17.25)</td>
<td>3.31 (2.51-3.34)</td>
<td>0</td>
<td>2.71</td>
<td>1.76-3.69</td>
<td>0.98 (0.98-0.98)</td>
</tr>
<tr>
<td>90 Pills</td>
<td>14,990,233</td>
<td>15.24 (13.35-17.13)</td>
<td>8.29 (2.52-17.78)</td>
<td>0</td>
<td>3.12</td>
<td>1.97-5.37</td>
<td>0.22 (0.22-0.22)</td>
</tr>
</tbody>
</table>

a The drugs listed were chosen based on the most frequently available prescriptions. 

b Savings in 2023 US dollars were determined by subtracting the Mark Cuban Cost Plus Drug Company price (as of March 2023) from the adjusted out-of-pocket payment listed in the Medical Expenditure Panel Survey (MEPS) per prescription. The median (IQR) adjustment in out-of-pocket costs in MEPS was -12% (-34% to 3%) based on changes in the National Average Drug Acquisition Cost between 2019 and 2023.
Savings varied substantially by health insurance type, with uninsured patients achieving the greatest benefit. Our findings are consistent with an analysis of Costco’s direct-to-consumer pharmacy, which found that higher spending occurred in 11% of Medicare Part D claims. In contrast, an analysis of the 20 most-prescribed generic drugs found that out-of-pocket costs for 20% of prescriptions exceeded prices for Prime members at Amazon Pharmacy. With generic drugs constituting 90% of all dispensed prescriptions, some patients can benefit from a transparent cost-plus pharmacy pricing model; however, for most, it is less expensive to use their health insurance benefits. Although MCCPDC sells most common generic drugs, only 26% of expensive generic drugs were available in May 2023.

Limitations of our study include its cross-sectional nature. The cost and supply of prescription drugs sold by MCCPDC change frequently. Our analysis was limited to MCCPDC mail-order prescriptions; we did not evaluate the potential cost savings of in-person pickup. Promoting transparent cost-plus pharmacy models, such as MCCPDC, can reduce out-of-pocket costs for a specific subset of patients.

ARTICLE INFORMATION
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Author Contributions: Dr Kouzy had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis. Drs Lalani and Ludmir contributed equally as senior authors.
Concept and design: Kouzy, Lalani, Ludmir.
Acquisition, analysis, or interpretation of data: All authors.
Drafting of the manuscript: Kouzy, Corrigan, Lalani, Ludmir.
Critical review of the manuscript for important intellectual content: All authors.
Statistical analysis: Kouzy, El Alam, Corrigan, Ludmir.
Administrative, technical, or material support: Lalani, Ludmir.
Supervision: Lalani, Ludmir.
Conflict of Interest Disclosures: None reported.
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REFERENCES

SUPPLEMENT 1.
eAppendix. Generic Drugs Analyzed

SUPPLEMENT 2.
Data Sharing Statement