This paper discusses possible solutions to the problem of excess out-of-pocket drug costs. We argue that allowing consumers to receive drug rebates directly at the "point-of-sale," rather than indirectly and opaquely through insurers and pharmacy benefit managers, will help make the healthcare system simpler and fairer.

Like clockwork, Congress holds hearings featuring Americans, both young and old, who are being hit hard by sky-high out-of-pocket drug costs. Surveys uniformly show that pharmaceutical companies are hugely distrusted. Many Americans regard drug costs as one of their biggest problems.

Even while politicians fume about the high prices of prescription drugs, solid statistics derived from multiple reliable sources show that out-of-pocket spending on prescription drugs as a share of household disposable income has fallen to a record low of only 0.3% (see Figure 1). By comparison, in 2005 out-of-pocket spending on prescription drugs was almost 0.6% of household disposable income, almost twice as much.

Nevertheless, some Americans find themselves with astronomical spending on drugs. We analyzed 2017 Medical Expenditure Panel Survey (MEPS) survey data on out-of-pocket prescription drug spending. Our results show that about 1% of Americans each year pay more than $2000 per year in out-of-pocket drug costs. That’s more than ten times the average, and a level that is clearly unacceptable.
These “high-spenders” with out-of-pocket prescription drug costs over $2000 are not evenly distributed throughout the population. Our results show that 2.9% of Americans 65 and over were “high spenders” in 2017. This is a heavy weight because many elderly live on fixed incomes. By comparison, only 0.8% of Americans under 65 who are not on Medicaid were high spenders in 2017.

Once we understand that the high-spenders are only a small percentage of the population, it becomes possible to ask a simple question: How much would it cost to “shave down” out-of-pocket prescription drug spending to a reasonable level?

We choose a goal of capping out-of-pocket prescription drug spending to only $2000 per year. Based on MEPS data, that goal would require reducing out-of-pocket outlays by the high spenders by about $8 billion, or 2-3% of total drug spending in the country, net of rebates.

For Americans 65 and over, the cost of shaving down the high-spenders would be about $3 billion. That’s equal to roughly 3% of total expenditures by Medicare Part D, the prescription drug benefit program, net of rebates.
So then the question is: What sort of policy can help the high spenders 65 and over? In broad terms, there are three options.

1. Keep the status quo.

2. Change the structure of Part D to reduce out-of-pocket costs.

3. Shift to “point-of-sale” (POS) rebates, to make sure that the high-spending consumers don’t get hit by excessively high out-of-pocket costs.

We explain why Option 3 is preferable. From the perspective of economics, this approach has several virtues. First, it clarifies the true cost of prescription medications and allows consumers and physicians to make better cost-benefit trade-offs. Second, it reduces the incentive for companies to raise their list prices while offering bigger rebates to insurance companies and pharmacy benefit managers (PBMs).

Third, and perhaps most important, passing the manufacturer rebates through to consumers helps the high spenders, who would be able to take better advantage of discounts and rebates. Indeed, the cries of pain from elderly Americans hit by high out-of-pocket spending would then directly correspond to net prices. The price mechanism would work.

The major objection to shifting pharma rebates to the consumer level comes from insurers. They claim that they are currently using rebates to reduce insurance premiums for everyone. Indeed, it is true that the Part D base beneficiary premium has been kept low.

But we have to look beyond the headline number. In real terms, aggregate Part D premiums have risen by 42% since 2013, including income-related adjustments. Other funding for Part D—mainly government contributions—is up just 24%, in real terms. And aggregate out-of-pocket spending on drugs by senior households, adjusted for inflation, has risen by only 15%. Per senior household, real out-of-pocket drug spending is down 2% since 2013.

Taken together, these figures suggest that a large share of drug rebates are already being passed onto senior Americans in the form of lower out-of-pocket spending, rather than lower premiums. It is therefore unlikely that shifting to POS rebates will need to greatly impact the base premium.

Shifting to POS rebates will eliminate the perverse situations where patients are laying out large sums without getting the benefit of rebates and discounts. POS rebates will also better align the prices that patients see with the actual costs of the drugs, leading to better decision-making.

However, if average out-of-pocket costs stay the same, POS rebates could end up imposing higher out-of-pocket costs on patients who don’t use medicines with big rebates. That’s neither fair nor politically tenable.

We therefore suggest that government should somewhat raise the contribution per enrollee, which on an inflation-adjusted basis has been relatively flat. We also suggest that drug manufacturers commit themselves to offer slightly higher rebates and discounts, at least for the transitional years.

The shift to POS rebates will be an important step forward in making the healthcare system simpler and fairer.
This paper discusses possible solutions to the problem of excess out-of-pocket drug costs. We argue that allowing consumers to receive drug rebates directly at the "point-of-sale," rather than indirectly and opaquely through insurers and pharmacy benefit managers, will help make the healthcare system simpler and fairer. Like clockwork, Congress holds hearings featuring Americans, both young and old, who are being hit hard by sky-high out-of-pocket drug costs. Surveys uniformly show that pharmaceutical companies are hugely distrusted. Many Americans regard drug costs as one of their biggest problems.

Indeed, it’s one of the few areas where Democrats and Republicans seem to agree. In the 2020 State of the Union, President Donald Trump called for legislation reducing prescription drug prices. The same week U.S Congressman Lloyd Doggett (D-TX) and U.S. Senator Sherrod Brown (D-OH) announced legislation that would empower Medicare to negotiate drug prices or even issue licenses to produce generic competitors to high-priced drugs.¹

Journalists regularly proclaim with indignant furor that drug companies are raising list prices for medications. At the beginning of January 2020, Reuters, a reputable news service, ran a story with the headline "Novartis, Merck and Allergan join those raising U.S. drug prices for 2020." The story went on to say, "445 drugs… will cost more in 2020."²

But buried deep within the article, where the average reader wouldn’t see, the reporters admit that in many cases the actual prices were going down, not up. Novartis, for example, noted that after discounts and rebates to commercial and government payers it expected a net price decrease of 2.5% in 2020. But that’s not the article headline.

Indeed, discounts and rebates have become an increasingly important part of drug pricing, so that the list price is increasingly less informative about actual payments. IQVIA estimates that discounts, rebates and other price concessions on brands reduce absolute invoice spending by 28%, a percentage that has been growing over time.
Even while politicians fume about the high prices of prescription drugs, solid statistics derived from multiple reliable sources show that out-of-pocket spending on prescription drugs as a share of household disposable income has fallen to a record low of only 0.3% (see Figure 1).

By comparison, in 2005 out-of-pocket spending on prescription drugs was almost 0.6% of household disposable income, almost twice as much.

What happened since then? Medicare Part D took effect in 2006. Before that, senior citizens had to pay for their drugs themselves, a very expensive proposition. Other changes include low-copays through Medicaid, and faster approval of generics. In FY2019, the FDA approved a record number of generics, including 125 drugs for which previously there was no generic competition. And rebates and discounts have continued to increase, going from 17% of invoice spending in 2009 to 28% in 2018.

Despite prevailing wisdom, there is little or no evidence of runaway growth of aggregate out-of-pocket drug costs. Table 1 compares some key statistics. As background, between 2009 and 2018, real disposable income per capita rose by 18%, while real personal healthcare spending per capita rose by nearly the same amount.

By comparison, economy-wide expenditures on prescription drugs per capita, net of rebates and discounts, and adjusted for inflation, rose at a much slower rate than overall disposable income. We calculated, based on statistics from IQVIA, that economy-wide expenditures on prescription drugs per capita, net of rebates and discounts, and adjusted for inflation, only rose by 10% from 2009 to 2018.

### Table 1. What’s Really Happened with Prescription Drug Spending

<table>
<thead>
<tr>
<th>Background</th>
<th>Percentage Change, 2009-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflation-adjusted disposable income per capita (BEA)</td>
<td>18%</td>
</tr>
<tr>
<td>Inflation-adjusted personal healthcare spending per capita (CMS, BEA, BLS)</td>
<td>17%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall Drug Spending</th>
<th>Percentage Change, 2009-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflation-adjusted net prescription drug spending per capita (IQVIA, BLS)</td>
<td>10%</td>
</tr>
<tr>
<td>Inflation-adjusted Part D reimbursement per enrollee (CMS, BLS)</td>
<td>6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Out-of-Pocket Spending</th>
<th>Percentage Change, 2009-2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflation-adjusted out-of-pocket spending on prescription drugs per capita (CMS, BLS)</td>
<td>-24%</td>
</tr>
<tr>
<td>Inflation-adjusted out-of-pocket spending on drugs per household headed by 65+ (BLS)</td>
<td>-21%</td>
</tr>
</tbody>
</table>

Data: BEA, CMS, IQVIA, BLS, PPI
Medicare Part D spending per beneficiary, adjusted for inflation, has grown even slower. It is only up by 6% from 2009 to 2018, far below the increase in real disposable income per capita.\(^5\)

These are aggregate figures for total spending. Even more surprisingly, the data looks even better for out-of-pocket spending. The Centers for Medicare and Medicaid Services (CMS) publishes estimates on out-of-pocket retail costs for prescription drugs.\(^6\) In 2018, the average out-of-pocket costs for prescription drugs per capita were only $143. Adjusted for inflation, that’s actually down by 24% since 2009.

Another set of similar figures comes from the Consumer Expenditure Survey (CES) from the Bureau of Labor Statistics. The CES directly queries households about their drug spending. (The CES asks that respondents report spending net of discount coupons). For households headed by people 65 and over, real out-of-pocket spending on prescription and nonprescription drugs is down by 21% since 2009.

The same trend is shown by the annual MEPS data, which not only asks people about their drug spending, but also examines pharmacy records. Based on this survey, a May 2019 research report from the Agency for Healthcare Research and Quality estimated that average out-of-pocket spending for prescribed medications, among persons who obtained at least one prescribed medication, declined from $327 in 2009 to $238 by 2016, a decrease of 27 percent. Adjusted for inflation, that’s a decline of 34%.

**INEQUALITY**

Now, all this data is good and well. Average out-of-pocket drug spending is clearly falling, especially when adjusted for inflation. Yet let’s not be stupid. The old adage of “where there’s smoke, there’s fire” definitely holds here. Averages are sometimes misleading, as in the old story about a billionaire walking into a bar. Average wealth in the bar goes way up, but that doesn’t make any of the individuals already drinking any richer.

Given how upset that Americans are with drug pricing and out-of-pocket spending, there must be problems that are not getting picked up by the aggregate numbers. One important issue, as it turns out, is age. As Americans age, out-of-pocket costs for prescription drugs soar.\(^7\) The reasons are two-fold: First, the current insurance system typically charges a co-pay or co-insurance for each prescription or refill, and second, the number of prescriptions rises sharply with age. Indeed, the typical American adds another prescription to their medicine cabinet every couple of years, year after year.

We call this the prescription escalator effect. So even if the price of individual medicines stays fixed, individual Americans personally experience an oppressive rise in their drug costs. As a result, people 65 and over, for example, devote 27% of their out-of-pocket health expenses to prescription pharmaceuticals, compared to only 16% for middle-aged Americans (Figure 2).

The prescription escalator effect also applies to people who get sick. A person in poor health has 47 prescriptions, on average, compared to 3 prescriptions for the person in excellent health. Generally speaking, each of these prescriptions requires a co-pay or co-insurance, translating immediately into a large increase in out-of-pocket drugs costs, just when the person is most vulnerable.
So while people who identify themselves as being in excellent health devote only 12% of their out-of-pocket expenses to prescription drugs, that percentage rises to 44% for people in poor health. The problem is not rising drug prices, but the way the reimbursement system is set up.

**THE STRUGGLING 1%**

Despite the modest average per capita out-of-pocket annual cost of $143, some Americans find themselves with astronomical spending on drugs. We analyzed 2017 MEPS survey data on out-of-pocket prescription drug spending. Our results show that about 1% of Americans each year pay more than $2000 per year in out-of-pocket drug costs. That’s more than ten times the average, and a level that is clearly unacceptable.

These “high-spenders” with out-of-pocket prescription drug costs over $2000 are not evenly distributed throughout the population. Our results show that 2.9% of Americans 65 and over were “high spenders” in 2017 (Figure 3). This is a heavy weight because many elderly live on fixed incomes. By comparison, only 0.8% of Americans under 65 who are not on Medicaid were high spenders in 2017.
However, despite their small numbers, high-spenders account for a large share of out-of-pocket costs. Overall, Americans with out-of-pocket drug costs over $2000 are responsible for roughly one-third of out-of-pocket costs (Table 2).

That doesn’t change much by age. For example, for Americans 65 and over, high spenders are responsible for one-third of out of pocket costs, even though the share of high spenders is much larger.

It should be noted that these figures do not take into account patient abandonment of prescribed drug regimes. Studies show that patient willingness to start and follow a drug treatment is heavily influenced by out-of-pocket expenses. Analysis by the IQVIA Institute shows that at $50 out-of-pocket for a prescription, new patient abandonment rates for both commercial and Medicare are in excess of 25%. If we estimated the potential spending rather than the actual spending, the percentage of people who are high-spenders would rise.

### COST OF HELPING THE HIGH-SPENDERS

Once we understand that the high-spenders are only a small percentage of the population, it becomes possible to ask a simple question: How much would it cost to “shave down” out-of-pocket prescription drug spending to a reasonable level?

We choose a goal of capping out-of-pocket prescription drug spending to only $2000 per year. Based on MEPS data, that goal would require reducing out-of-pocket outlays by the high spenders by about $8 billion, or 2-3% of total drug spending in the country, net of rebates.

For Americans 65 and over, the cost of shaving down the high-spenders would be about $3 billion. That’s equal to roughly 3% of total expenditures by Part D, net of rebates.

As a result, the aggregate cost of “shaving down” the high-spenders is significant but not huge, relative to total spending.

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**TABLE 2: IMPORTANCE OF HIGH-SPENDERS IN OUT-OF-POCKET DRUG COSTS**

<table>
<thead>
<tr>
<th>AGE</th>
<th>TOTAL OUT-OF-POCKET PRESCRIPTION DRUG EXPENSES (BILLIONS OF $)</th>
<th>OUT-OF-POCKET PRESCRIPTION DRUG EXPENSES FOR HIGH SPENDERS* (BILLIONS OF $)</th>
<th>HIGH SPENDER SHARE OF OUT-OF-POCKET PRESCRIPTION DRUG EXPENSES (PERCENT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;25</td>
<td>3.7</td>
<td>1.2</td>
<td>32%</td>
</tr>
<tr>
<td>25-34</td>
<td>2.8</td>
<td>0.9</td>
<td>33%</td>
</tr>
<tr>
<td>35-44</td>
<td>3.4</td>
<td>0.7</td>
<td>22%</td>
</tr>
<tr>
<td>45-54</td>
<td>6.4</td>
<td>2.0</td>
<td>32%</td>
</tr>
<tr>
<td>55-64</td>
<td>10.7</td>
<td>3.7</td>
<td>34%</td>
</tr>
<tr>
<td>65+</td>
<td>19.0</td>
<td>6.1</td>
<td>32%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>45.9</strong></td>
<td><strong>14.6</strong></td>
<td><strong>32%</strong></td>
</tr>
</tbody>
</table>

*For people with outlays $2000 and over

Data: MEPS, PPI
However, it should be pointed out that shifting the full cost of helping the high spenders to other Americans, in the form of higher out-of-pocket spending, could make a big difference. For example, if out-of-pocket drug spending for high-spenders 65 and over is reduced down to $2000, while holding constant aggregate out-of-pocket drug spending for all Americans 65 and over, then out-of-pocket drug spending for the non-high-spenders in that age group will rise by roughly 25%. The implication is that the cost of helping the high-spenders has to be shared, rather than just shifted to the rest of the patient population.

**POTENTIAL SOLUTIONS**

Even though the average real out-of-pocket spending on drugs has been falling, about 1% of Americans pay more than $2000 per year in out-of-pocket costs. From the humanitarian perspective, that’s not satisfactory.

The biggest problem is for older Americans, who are on a fixed income. So then the question is: What sort of policy can help the high spenders 65 and over? In broad terms, there are three options.

1. Keep the status quo.
2. Change the structure of Part D to reduce out-of-pocket costs.
3. Shift to POS rebates, to make sure that the high-spending consumers don’t get hit by excessively high out-of-pocket costs.
OPTION 1: STATUS QUO
If you ask privately, there is a surprising amount of support for keeping the status quo, which helps the great majority of Americans with their drug bills but leaves a few exposed. The current system protects the poorest patients through Medicaid, and leaves the rest with some "skin in the game" so that they will exercise caution in buying. Speaking cynically, the current system also produces enough high profile victims to put political pressure on pharmaceutical companies.

On the other hand, the status quo also has several important downsides. First, the sickest Americans get stuck holding the bag for high pharma costs, because they need the most medications. That’s not fair.

The status quo also preserves the current complicated system of intentionally opaque rebates. Moreover, the lack of transparency makes it easier for politicians to target list prices, even though list prices and net prices are becoming increasingly disconnected.

OPTION 2: TINKERING WITH PART D
The second option involves tinkering with the structure of Part D reimbursement to reduce excess out-of-pocket spending. There are many different levers that Congress can use. For example, in 2018 Congress required manufacturers to offer bigger discounts in the "coverage gap," which starts at $4020 in 2020.8

Another possibility is that the government can simply contribute more to Part D by say, reducing the coverage gap. That would have the effect of lowering the number of people who are high-spenders.

The government contribution to Medicare Part D, per enrollee, is basically the same level as in 2009, after adjusting for inflation. It would be totally appropriate for government to boost its real contribution slightly to deal with excess out-of-pocket spending for the elderly.

As noted in the previous section, for Americans 65 and over, the cost of shaving down the high-spenders would be about $3 billion. That’s equal to roughly 3% of total expenditures by Part D, net of rebates.
OPTION 3: SHIFTING ALL MANUFACTURER REBATES TO THE CONSUMER POINT OF SALES (POS) LEVEL

Option 3 is to shift all manufacturer rebates to the consumer (POS) level. That was originally proposed by the Department of Health and Human Services in January 2019, and then withdrawn in July 2019.\(^9\) This proposal would have required the rebates to be passed onto the consumers utilizing the medications, so that they couldn’t be used to subsidize premiums of other patients.

From the perspective of economics, this approach has several virtues. First, it clarifies the true cost of prescription medications and allows consumers and physicians to make better cost-benefit trade-offs. Second, it reduces the incentive for companies to raise their list prices while offering bigger rebates to insurance companies and PBMs.

Third, and perhaps most important, passing the manufacturer rebates through to consumers helps the high spenders, who would be able to take better advantage of discounts and rebates. Indeed, the cries of pain from elderly Americans hit by high out-of-pocket spending would then directly correspond to net prices. The price mechanism would work.

The Congressional Budget Office suggested that the proposal would cost roughly $18 billion per year.\(^10\) Other researchers found much lower estimates.\(^11\)

Research done by the well-regarded Institute for Clinical and Economic Review shows that the impact of POS rebates on spending depends very much on the behavioral assumptions in the model. In March 2019 the authors of an ICER paper wrote, “[t]he impact of POS rebates on overall spending is unclear.”

In particular, slight tweaks to the mechanics of the coverage gap could greatly reduce the cost of POS rebates to the government.

The major objection to shifting pharma rebates to the consumer level comes from insurers. They claim that they are currently using rebates to reduce insurance premiums for everyone. Indeed, it is true that the Part D base beneficiary premium has been kept low.

But we have to look beyond the headline number. In real terms, aggregate Part D premiums have risen by 42% since 2013, including income-related adjustments. Other funding for Part D—mainly government contributions—is up just 24%, in real terms. And aggregate out-of-pocket spending on drugs by senior households, adjusted for inflation, has risen by only 15%. Per senior household, real out-of-pocket drug spending is down 2% since 2013.

Certainly this divergence between the growth rate of premiums, Part D government spending, and out-of-pocket spending by senior households could be the result of many factors.

Nevertheless, taken together, these figures suggest that a large share of drug rebates are already being passed onto senior Americans in the form of lower out-of-pocket spending, rather than lower premiums. It is therefore unlikely that shifting to POS rebates will need to greatly impact the base premium.
CONCLUSION
Shifting to POS rebates will eliminate the perverse situations where patients are laying out large sums without getting the benefit of rebates and discounts. POS rebates will also better align the prices that patients see with the actual costs of the drugs, leading to better decision-making.

However, if average out-of-pocket costs stay the same, POS rebates could end up imposing higher out-of-pocket costs on patients who don’t use medicines with big rebates. That’s neither fair nor politically tenable.

We therefore suggest that government should somewhat raise the contribution per enrollee, which on an inflation-adjusted basis has been relatively flat. We also suggest that drug manufacturers commit themselves to offer slightly higher rebates and discounts, at least for the transitional years.

We note that shifting to POS rebates will make the pricing system more transparent, with interesting effects. On the one hand, drug company skeptics worry that with prices more transparent, it will make it harder for insurers and PBMs to negotiate high rebates.

On the other hand, transparency will clarify that the price of drugs, net of rebates, has been rising much slower than list prices. We should see lower levels of abandonment and better adherence to prescribed drug regimes.

The shift to POS rebates will be an important step forward in making the healthcare system simpler and fairer.

ABOUT THE AUTHOR
Dr. Michael Mandel is chief economic strategist at the Progressive Policy Institute and senior fellow at Wharton’s Mack Institute for Innovation Management at the University of Pennsylvania.
Sources


4. “Net-price spending” is IQVIA’s proprietary derived estimate of the amount received by pharmaceutical manufacturers after rebates, off-invoice discounts and other price concessions have been made by manufacturers to distributors, health plans and intermediaries.


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