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Why Prescription Drug Price Transparency Matters

ISSUE BRIEF

JUNE 2018

KEY TAKEAWAYS

95%
\$10,000+

About 95 percent of specialty drugs and 85 percent of orphan drugs cost more than \$10,000 per patient per year. Few branded and no generic drugs have annual per patient cost exceeding this threshold.

↑ 10%

On average, approximately 700 drugs have increased their prices by 10 percent or more a year in the past five years. The vast majority of them are branded drugs.



The number of drugs with double-digit price increases has slowed in the last two years for branded prescription drugs, indicating that scrutiny and accountability may help slow down price increases.

Background

Drug prices are out of control, hurting hardworking families across the United States. Prescription drugs comprise an ever-increasing percentage of medical costs and drive up what consumers pay for their premiums and other health care costs. This is particularly true of brand-name drugs, which are launched with sky-high list prices that are raised by double-digit percentages year over year.

States have been working to find new ways to approach the drug pricing problem. Several proposals focus on increasing visibility into how drug prices are set, and the decisions that lead to price increases. One popular proposal would require drug manufacturers to submit reports to the state for drugs with annual costs of more than \$10,000. Another proposal would require that drug companies report price increases over a given percentage, such as greater than 10 percent in a year. As part of the process, drug manufacturers would need to describe why those prices and increases are necessary.

Drug manufacturers have argued that such legislation would unreasonably increase the administrative burden on them and to the state, with little to no value returned. As a national, nonpartisan organization committed to increasing value and decreasing costs for all health care consumers, America's Health Insurance Plans (AHIP) studied the likely impact of these proposals, including what the administrative burden would be for a state, and what return the state could reasonably expect from their implementation.

Our research revealed that legislative proposals would result in a minimal administrative burden for drug companies and the state. Required filings for drugs costing more than \$10,000 annually would impact primarily specialty and orphan drugs. In contrast, few branded drugs and no generic drugs would be subject to the filing requirement.

Under alternative proposals that would require filings for drugs that increase in cost at more than 10 percent per year, approximately 20 percent of branded drugs and less than 6 percent of generics would require filings, for a total of approximately 700 drugs.

The number of drugs with price increases has slowed in the last two years for branded prescription drugs, which may be partly explained by public pressure and increased scrutiny of prescription drug prices by a variety of stakeholders. Thus, the actual reporting burden of the drug price transparency laws on both the pharmaceutical industry and the overseeing state agencies appears likely to be lower than suggested by the past data.

Introduction

As drug prices continue to rise, the share of overall health care spending attributable to prescription drugs continues to grow. Prescription drugs are a costly portion of overall U.S. health care spending:

- Prescription drugs accounted for \$328.6 billion dollars of total health care spending in 2016.¹
- A May 2018 analysis by AHIP finds that 23.3 cents of every health care dollar goes to pay for prescription drugs – an amount higher than any other spending category.²
- According to the CMS Office of the Actuary, prescription drug spending growth is projected to outpace growth in all other major sectors of health care, averaging 6.3 percent for 2017-2026.³

Faced with ever-increasing drug prices, states have been working to find new ways to approach the drug pricing problem. Initiatives considered by state legislatures included the following: (1) establishing a commission to study drug pricing and identify key drivers of costs; (2) calling for CMS to negotiate reasonable prices with drug makers; (3) empowering state Medicaid agencies to negotiate drug price rebates; and (4) establishing penalties on price gouging behavior by drug manufacturers.⁴

One popular approach is to shine the spotlight on the way drug makers set prices for their prescription drugs. In 2018, 22 states have introduced legislation promoting greater transparency from drug manufacturers around their drug pricing methods. In 2018, this type of legislation passed in Oregon and Maine. California, Maryland, and Nevada passed similar laws in 2017.

A common theme in drug price transparency legislation is the requirement that drug manufacturers report drug pricing information for drugs that either (1) increase in price by a given percentage in a set period of time (i.e., annually), or (2) have an estimated annual cost exceeding a certain amount (i.e., \$10,000 or more). As part of the process, drug manufacturers would need to describe why those prices and increases are necessary. The goal of drug transparency legislation is to understand the factors driving the continuous drug price increases and the high annual costs of certain drugs. This information can then lead to more informed debates and more effective solutions to the problem of skyrocketing prescription drug costs.

Drug manufacturers have argued that such legislation would unreasonably increase the administrative burden, with little to no value returned. The purpose of this research study is to assess the likely impact of these proposals, including what the administrative burden would be for a state. To that end, this research study: (1) estimates the number of brand and generic drugs that increased or decreased the annual price in 2013-2017; and (2) estimates the proportion of drugs having per patient cost in excess of \$10,000 per year.

Annual Price Increases for Branded and Generic Drugs

Methods Summary

From the REDBOOK™ (Truven Health, Inc), we compiled a sample of all generic and branded prescription drugs that reported Wholesale Acquisition Cost (WAC) unit prices from 2013-2017. For each drug, the annual price change was calculated as the simple average annual price change across all strength, formulation and packaging options for that drug. Then a count of drugs with price changes exceeding various thresholds was calculated. For a more detailed methodology, please consult Appendices A and B.

Results

1. Branded prescription drugs account for the majority of all drug price increases.

The average share of branded and generic prescription drugs exceeding a given threshold in 2013-2017 is shown in Figure 1. In each year, drug makers increased prices for almost half of all branded prescription drugs in the sample. Slightly over 40 percent of branded drugs saw price increases of at least 5 percent. One in ten brand drugs saw annual price increases of more than 20 percent.

In contrast, generic drug manufacturers increased prices for only 1 in 12 drugs. Only 7 percent of generic drugs saw price increases of at least 5 percent, while only 1 in 20 generics saw price increases in excess of 20 percent.

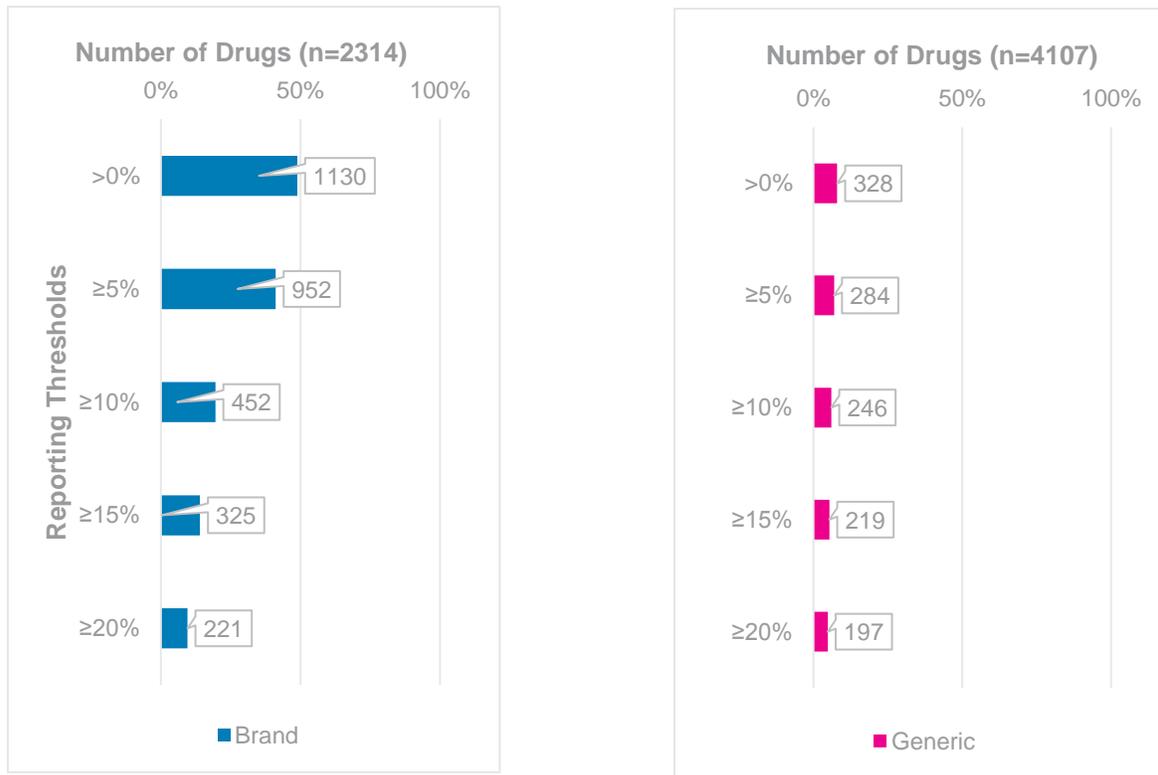
During this time period, of all drugs that saw a price increase, 78 percent were branded drugs.

Furthermore, prices for generic prescription drugs were more likely to decrease than prices for branded prescription drugs (see Table 1 in Appendix D). On average, generic drug manufacturers have reduced prices for around 5 percent of generic prescription drugs in 2013-2017. In contrast, drug makers reduced prices for less than 1 percent of branded prescription drugs in the same period.

The price increase percentage chosen for the reporting threshold greatly impacts the number of branded drugs that would be subject to reporting requirement. As the reporting threshold is increased by 5 percent, the reporting burden is reduced for hundreds of drugs (Figure 1). For example, setting the reporting threshold at 5 percent would lead to twice as many reports for branded prescription drugs as a threshold of 10 percent (952 vs. 452 drugs). The differences between higher thresholds, while not as large, are still sizable. Increasing the threshold from 10 percent to 15 percent, or from 15 percent to 20 percent would reduce the reporting requirements by slightly over 100 branded drugs.

For the generic prescription drugs, the choice of a threshold has less impact. Choosing a higher, less stringent threshold reduces the reporting requirement for only a few dozen drugs. Additionally, as noted above, generic drugs are more likely to not increase, and in some cases even reduce, their prices over time.

Figure 1. Average Number of Drugs Exceeding a Potential Reporting Threshold, 2013-2017

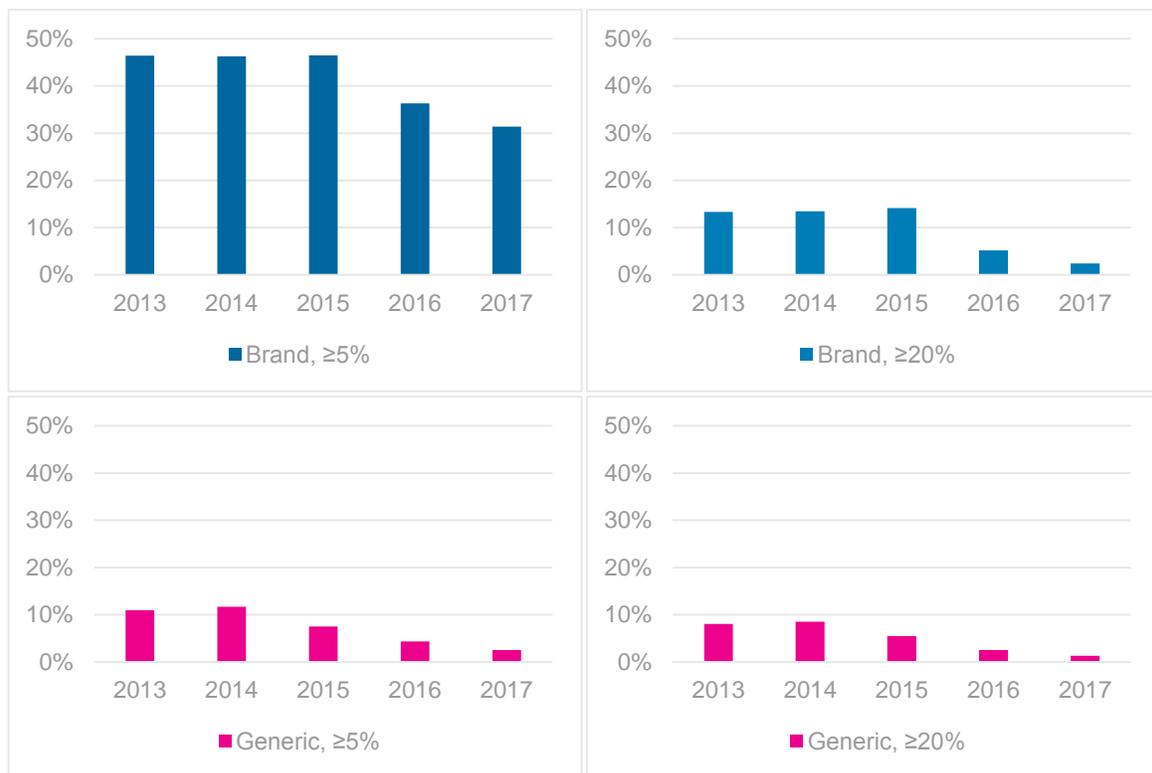


2. The share of drugs having annual price increases has decreased in recent years.

The share of drugs with price increases has slowed in the last two years for branded prescription drugs and the last three years for the generics (Figure 2). From 2013-2015, branded prescription drugs posted a steady set of significant price increases. That share decreased in 2016 and to a lesser degree in 2017. In the last two years, the total number of drugs that had annual price increases of 5 percent or more have decreased from almost half of all branded prescription drugs to about a third. The share of annual price increases of over 20 percent has dropped from 14 percent in 2015 to just over 2 percent in 2017.

For generic drugs, the number of prescription drugs experiencing price increases remained steady in 2013 and 2014 and then gradually declined. The share of price increases above 5 percent declined from 12 percent in 2014 to less than 3 percent in 2017. The share of price increases above 20 percent dropped from 9 percent in 2014 to just over 1 percent in 2017.

Figure 2. Share of Prescription Drugs with Annual Price Increases, 2013-2017



The decline in the share of drugs with price increases, particularly for branded prescription drugs, may be explained, at least in part, by public pressure and increased scrutiny of prescription drug prices by a variety of stakeholders. Over the last several years, the issue of high drug prices and egregious price increases attracted attention of lawmakers, the media, and the general public.^{5,6,7} Drug makers faced added scrutiny over their drug pricing practices and potential legislative action to control such prices. Such added scrutiny, in addition to other factors, may be responsible for the more cautious approach to drug pricing. It is uncertain if these trends would continue.

3. Maintaining a consistent method for tracking drug price increases is important.

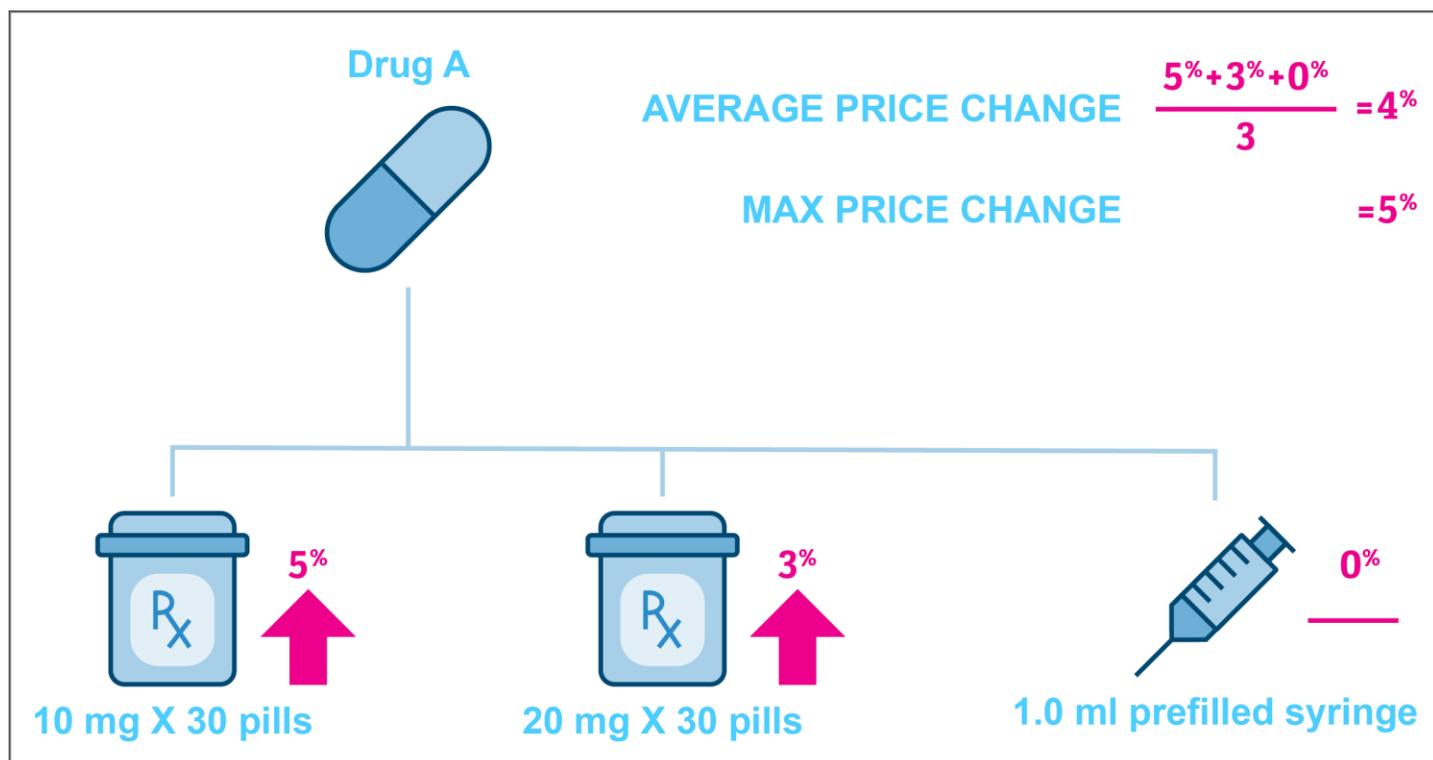
There are two different methods that can be used to calculate annual drug price changes:

1. Average Method. In this method, changes in unit prices are averaged across all the various versions of a drug. This is the method used in previous sections. For a more detailed methodology, please consult Appendix B.
2. Max Change Method. In this method, the change in drug price is based only on the one particular version of the drug having the greatest change in unit price.

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While in most cases, drug makers increase prices for all the different versions of a drug in tandem, they may choose to increase prices for only one or a few of the drug versions in a given year. If a pharmaceutical company increases the prices for all drug versions by the same percentage, then both methods will yield the same drug price increase amount. However, if prices increase for some versions but not others, the average price across versions might be lower than the actual price increase of one specific version of the drug (Figure 3). Thus, the Average Method masks certain annual price increases. This is important as drug manufacturers may increase the price on, say, the most popular versions above the reporting threshold, but not increase prices on less popular forms.

Figure 3. Two Methods for Calculating Annual Drug Price Change.



Note: Under the Average Method, the drug price change is calculated as an average of all price changes. In this example the method yields a 4 percent increase. Under the Max Change Method, the drug price change is assumed to equal the greatest price change across drug versions. In this example, the greatest price change, a bottle of 10mg x 30 pills, yields the drug price increase of 5 percent.

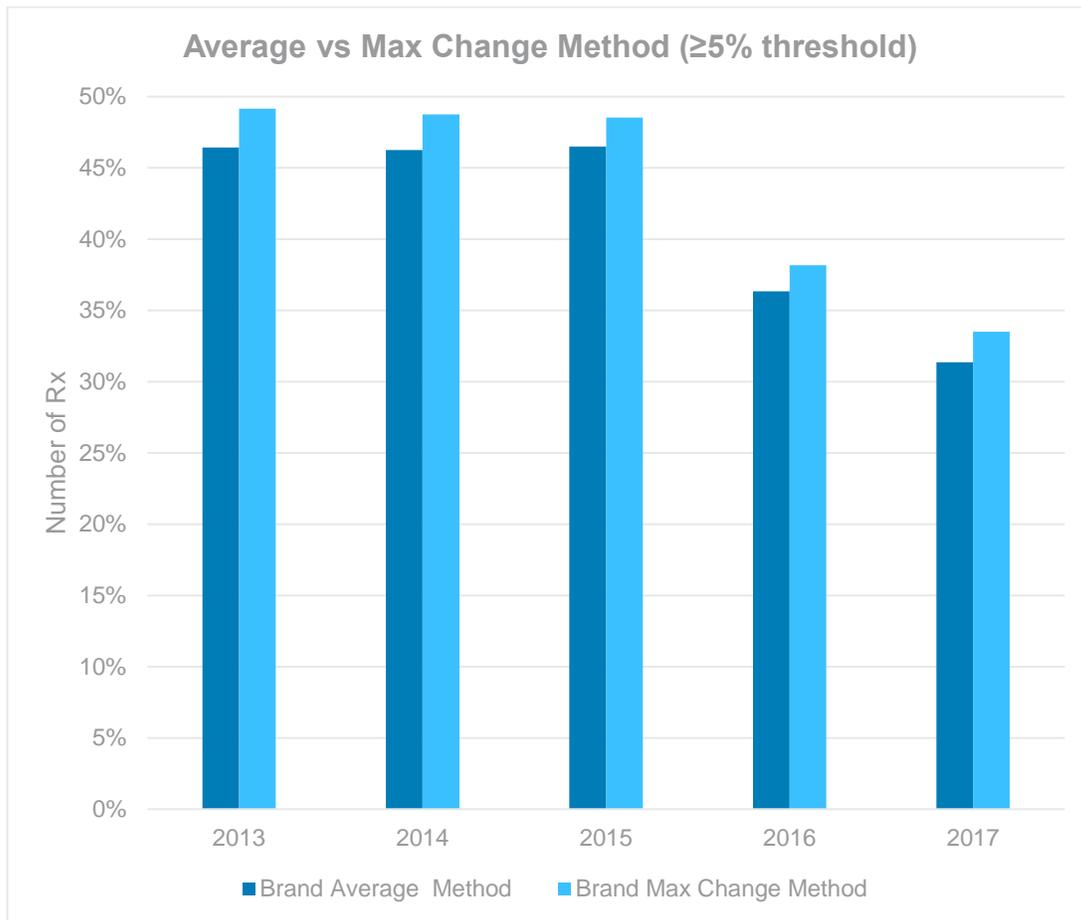
The study findings indicate that the case where the two methods yield different annual drug price changes are not uncommon. The share of drugs with price increases exceeding a 5 percent threshold is shown in Figure 4, as an example. The figure shows drug price increases calculated using the two different methods: (1) Average Method; (2) Max Change Method.

For branded drugs particularly, the choice of the method for calculating drug price changes can make a difference. For example, using the Max Change Method results in 3 percent higher share of branded prescription drugs with prices exceeding the threshold compared to the Average Method. For

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generic drugs, the two methods yield almost identical results (less than 1 percent difference, Appendix D).

Figure 4. Share of Drug with Annual Price Increases using Average vs. Max Change Method



Should policymakers choose the average price to trigger the reporting requirement, it is possible that some drug makers may “game” the system by increasing prices for only a few versions of a drug in any given year. For example, a pharmaceutical company may increase prices above the threshold on a pediatric version of a drug but not the adult version. Alternatively, it may increase prices on self-injector pens but not subcutaneous injection vials. Yet, by increasing prices on only some product versions and not changing prices

for the other versions of the same drug, the company may avoid triggering the reporting requirement.

High-Priced Drugs

Another common requirement in many drug transparency bills is the reporting requirement for drugs with high annual treatment cost. In this case, the reporting requirement is triggered

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not by the annual price increase but by the total annual per patient cost. A typical threshold is set at \$10,000 per patient in annual drug cost.

Methods Summary

We compiled a random sample of generic, branded, specialty, and orphan drugs with 20 drugs in each category. For each drug, we estimated its annual cost per patient. We then calculated the share of drugs in each category where the annual drug cost exceeded \$10,000 per patient. For a more detailed methodology, please consult Appendix C.

Results

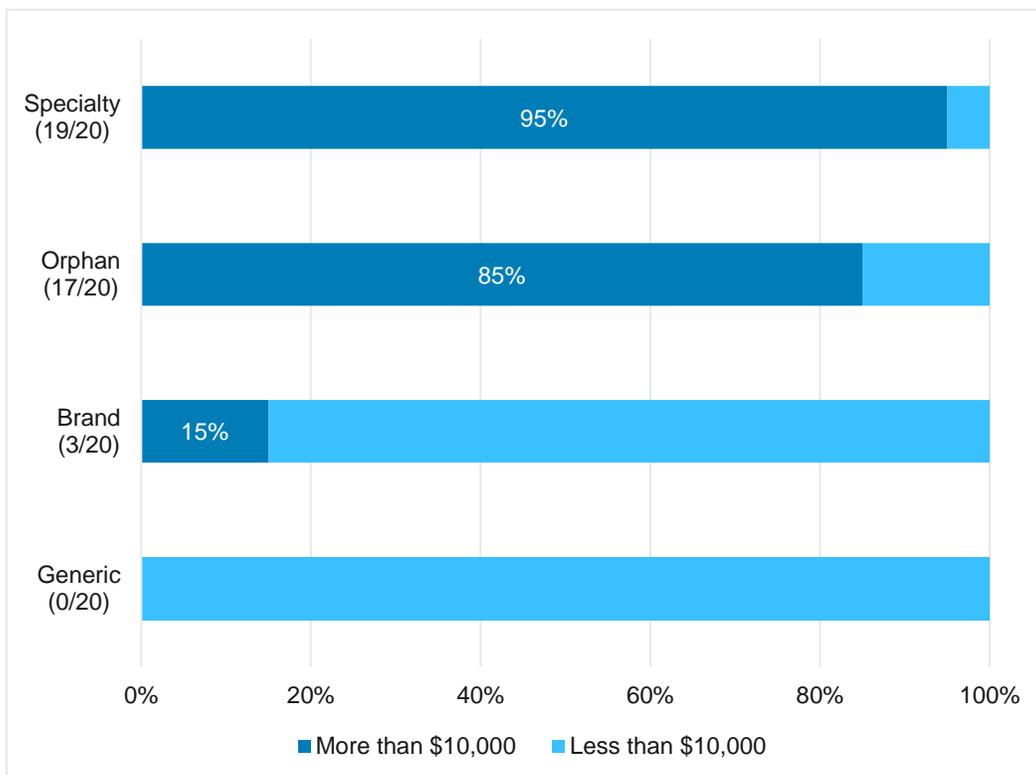
Unsurprisingly, most specialty and orphan drugs had an annual treatment cost exceeding

\$10,000. Orphan drugs treat rare medical conditions afflicting fewer than 200,000 patients.⁸ Given the low number of potential patients, drug makers price orphan drugs higher. As a result, most orphan drugs would trigger the reporting requirement.

While there is no official definition of a specialty drug, insurance companies designate certain complex drugs that require special handling as specialty drugs. Most of these specialty drugs would also trigger the reporting requirement (Figure 5).

In contrast, only 1 out of 6 branded prescription drugs and no generic drugs would trigger the reporting requirement (Full list, Appendix E).

Figure 5. Drugs with Annual Per Patient Cost Exceeding \$10,000 by Type of Drug



Discussion

Drug price transparency laws raise two major questions: will they be effective in reducing prices, and how large a burden will they impose on the pharmaceutical industry and regulatory agencies?

The primary aim of drug transparency laws is to empower consumers, state health agencies, and health insurance providers with better information on drug prices. Extensive literature in the field of economics demonstrates that providing buyers with better information regarding product quality and cost enables them to seek out and negotiate better prices.^{9,10,11,12} Interestingly, a growing body of literature shows that the same holds true in business-to-business setting. Even when price negotiations happen between professionals with greater expertise than a typical consumer, better information allows the buyers to secure better prices from the sellers.^{13,14,15}

In one such example, Grennan and Swanson (2016) examined the impact of greater price information transparency in the market for medical devices.¹⁶ They found that prices that different hospitals paid for the same medical devices varied considerably. However, when hospitals gained access to a benchmarking database of prices paid by peer hospitals, they were able to negotiate lower prices. Through a similar mechanism, drug transparency laws will improve the bargaining ability that state health agencies, pharmacy benefit managers, and health insurance providers have when negotiating drug prices with drug makers and will consequently lead to lower prices.

As the study results indicate, drug makers routinely increase prices for branded

prescription drugs. A reporting requirement at any threshold will likely affect hundreds of branded drugs and only a handful of generic drugs. On the other hand, the slower pace of price increases in the last two years suggests that public pressure may be working.

Faced with added scrutiny of their pricing policies, drug makers may be less willing to increase prices as aggressively and as often as before 2016. Based on the recent data, the actual reporting burden of the drug price transparency laws on both the pharmaceutical industry and the overseeing state agencies appears likely to be lower than suggested by the past data.

Contrary to the pharmaceutical industry's claim that drug transparency laws will impose excessively high administrative burden on drug makers, California's experience demonstrates that the approach is both workable and working. Continued public pressure and demand for accountability will likely slow the pace of drug price increases, which in turn will limit the reporting burden for both the drug makers and state regulators.

Implementation of the laws will be key to their effectiveness. As this study shows, using average price for a drug could potentially mask the true price increases. Drug makers could increase prices for only a few drug versions in a given year to keep the average drug price increases under the reporting threshold. Alternatively, drug makers may choose to rely on high launch prices for branded drugs instead of annual increases. In this context, basing the reporting requirement on annual per patient treatment cost is equally important.

Appendix A

Definition of Drug

A drug is commonly understood as all pharmaceutical products that contains the same set of active ingredients. Drug makers may produce multiple drugs, which come in different formulations, strengths, and packaging configurations (Figure 6). For example, an antidepressant drug Wellbutrin contains an active ingredient bupropion hydrochloride. However, there is no unique price associated with Wellbutrin. Since Wellbutrin is a generic drug, it is manufactured by 19 different generic drug makers, each responsible for setting its own prices. In turn, each generic drug maker produces different versions of Wellbutrin, varying in form (regular, sustained release, and extended release), strength (75 mg, 100 mg, 150 mg, 200 mg, 300 mg) and number of pills in the bottle (30, 60, 90, 100, 250, 500), which may be priced differently. Each combination of pill strength and bottle size of Wellbutrin has a unique National Drug Code (NDC) assigned to it, for a total of over 130 different NDC codes for this one drug. The NDC is a unique, 11-digit code, assigned by the U.S. Food & Drug Administration, that identifies a drug, its strength, its manufacturer, and its packaging.

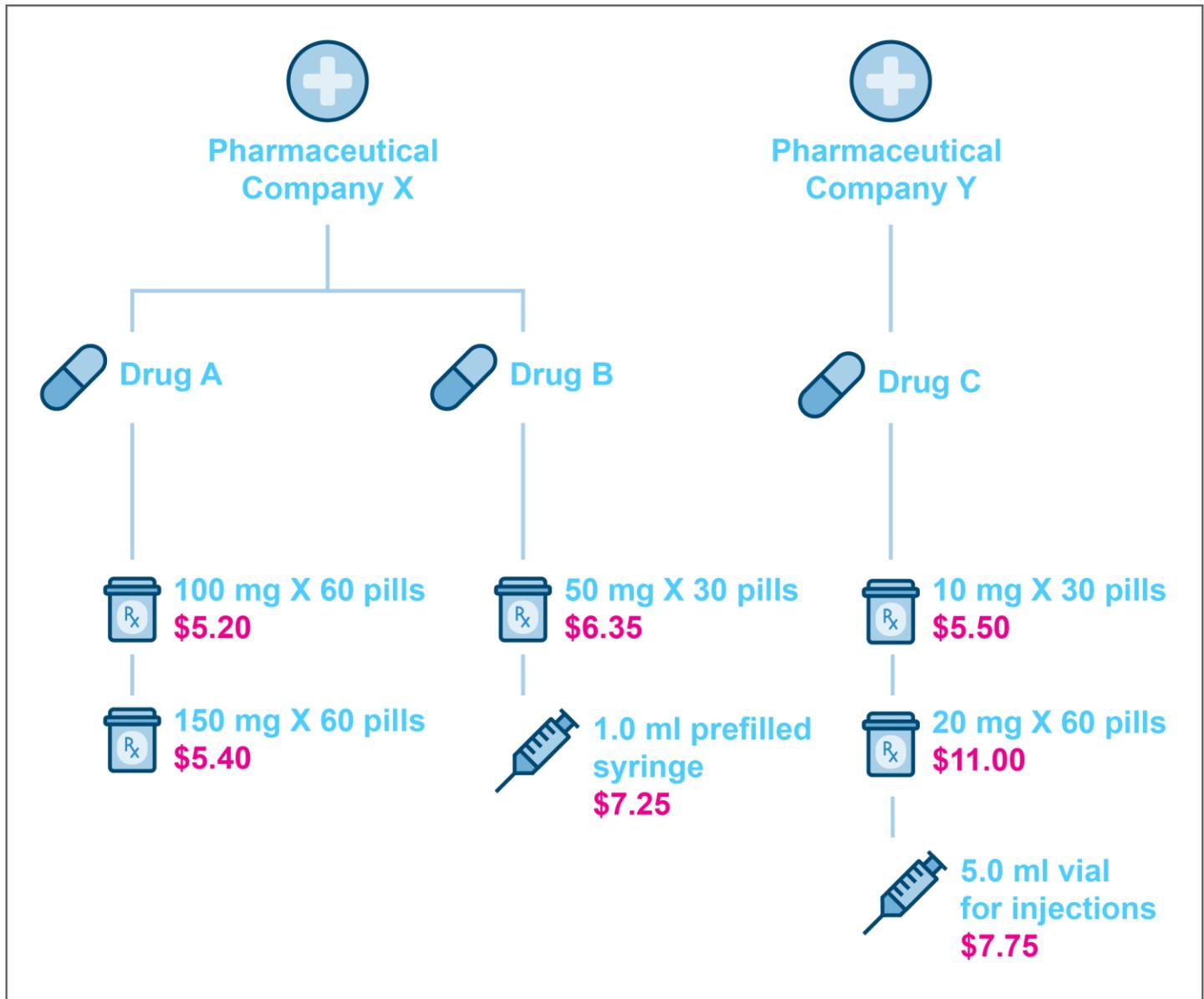
In contrast, a popular rheumatoid arthritis drug Humira is a single-source brand drug, which means that it is manufactured by only one pharmaceutical company, Abbvie Inc. It comes in a prefilled syringe and a self-injector pen forms. Both forms come in various packaging options (e.g., pack of two, three, four or six prefilled syringes). Prefilled syringes further differ in strength (10 MG/0.2 ML, 20 MG/0.4 ML, 40 MG/0.8 ML) and offer pediatric version. In all, there are eight NDCs currently in use associated with various combinations of Humira.

Drug makers set and report prices for each NDC. In theory, this means drug makers could increase prices for only some NDCs and not the others. For example, Abbvie may increase prices for self-injector pens but not prefilled syringes. In practice, drug makers tend to change the prices of all NDCs for a particular drug in tandem.

In this study a drug is defined as a prescription drug produced by a specific manufacturer. Thus, Humira, produced by Abbvie, is counted as a single drug. In contrast, Wellbutrin, produced by 19 different generic drug makers, is counted as 19 different drugs regardless of how many NDCs each company may have for Wellbutrin. Prices for each drug are calculated by averaging prices across NDCs.

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Figure 6. Relationship between Manufacturers, Drugs, and NDCs



Note: Each pharmaceutical company manufactures many drugs. Single-source brand drugs are manufactured by only one pharmaceutical company. Generic drugs are manufactured by multiple drug makers. Each drug comes in different strength, formulation, and packaging options. Each combination is assigned a unique NDC and a price. A price for a drug, then, can be calculated by taking the average across all available NDCs.

Appendix B

Methodology: Price Increases for Branded and Generic Drugs

The study counted the number of drugs with annual price changes exceeding various thresholds in 2013-2017. All NDCs listed in the March 2018 edition of the REDBOOK (Truven Health, Inc) as being either a branded prescription drug or a generic prescription drug (based on product category) were selected. NDCs that did not report the Wholesale Acquisition Cost (WAC) unit price or the price change date were excluded. In addition, all NDCs that were deactivated before Dec. 31 of each study year were excluded.

For each NDC, the WAC unit price that was in effect on Jan. 1, and Dec. 31 of each study year was recorded. In addition, the study identified its manufacturer and generic cross reference (GCR) code. A GCR code is a unique six-digit code in REDBOOK assigned to all products that contain the same set of active ingredients. Extracting all records containing the same GCR code allows to identify comparable products regardless of trade or generic name. NDCs that shared the same GCR code and manufacturer were grouped together and counted as a single drug.

Two different annual price changes were calculated for each drug: (1) Average NDC Method; (2) Single NDC Method. Under the Average NDC Method for each drug, the Jan. 1 and Dec. 31 unit price was averaged across all NDCs contained in a drug. Then the average Jan. 1 unit price was subtracted from the average Dec. 31 unit price and the resulting difference divided by the average Jan. 1 unit price to yield an annual percentage change in price for that drug.

The Single NDC Method calculated the annual price changes for each NDC and counted the greatest annual NDC price change as the annual price change of the drug. For each NDC, the Jan. 1 unit price was subtracted from the Dec. 31 unit price and the resulting difference divided by the Jan. 1 unit price to yield the NDC's annual price change. Then, annual price changes for all NDCs for a given drug were compared and the greatest annual price change was counted as the annual price change of the drug.

The annual price change based on the Average NDC Method is reported. The data from the Single NDC Method are provided in the appendix for reference.

The total number of drugs with annual price increases exceeding 5 percent, 10 percent, 15 percent, and 20 percent thresholds was counted separately for branded and generic prescription drugs for each study year. Similar calculations were performed for drugs with decreasing prices. In addition, the number of drugs that experienced no price changes was counted. The share of drugs with annual price increases and decreases exceeding thresholds was calculated by dividing the number of drugs exceeding the threshold by the total number of either branded or generic prescription drugs in the sample.

Appendix C

Methodology: High-Priced Drugs

A random sample of 20 prescription medications was chosen for each category of drugs, as this provided reasonably stable estimates for each category. The sampling frame used in the selection of generic drugs for inclusion in the study was the “*List of Authorized Generics*” available on the FDA website.¹⁷ The sampling frame for the orphan drug category was a list, compiled using the “*Search Orphan Designations and Approvals*” function on the FDA website, of drugs available during the 2011-2017 timeframe and having an orphan indication as its only FDA-approved indication during this same period.¹⁸

For both the specialty drug and branded drug categories, a list of drugs was compiled using the publicly-available formularies from the following health insurers: Coventry Health Care¹⁹, Geisinger Health Plan---Triple Choice²⁰, and OptumRx’s Prescription Drug List²¹, 2018. The sampling frame for the specialty drug group was the list of drugs either designated as specialty pharmacy agents or appearing on the specialty pharmacy tiers of these three formularies, with all duplicates removed. The sampling frame for the branded category was the list of non-generic drugs that were not designated as specialty pharmacy agents or not appearing on the specialty pharmacy tiers of these three formularies, with all duplicates removed. Four lists of 20 random integers were then generated using SAS, per the method described by Wicklin²², and the corresponding 20 drugs were then selected from each sampling frame and included in the final analytical sample.

For each drug, estimates of the annual utilization, for a typical patient, were calculated based upon the standard dosing information found in the current FDA-approved labeling. We took the following into consideration:

- a. All patients were assumed to be non-elderly adults.
- b. Commonly-accepted estimates of age-appropriate body weight or body surface area were used for those medications dosed by body weight or surface area. Adult body weight was assumed to equal 75kg. Body surface area was assumed to equal 1.6m².
- c. In general, a "middle" dose or course of treatment was assumed whenever possible.
- d. For those medications having an indefinite duration of use, 12 months of use was assumed.
- e. For those medications having use in more than one disease, the earliest approved indication was used.

The latest available WAC unit price listed in the March 2018 edition of the REDBOOK was recorded. For single-source drugs (orphan drugs, specialty drugs, and non-specialty brand drugs), the WAC unit price was averaged across different package size options. For generic drugs, the WAC unit price was averaged across different manufacturer and package size options. The total annual expenditure was calculated as the average WAC unit price multiplied by the total quantity of product units to be consumed annually.

Appendix D

Section I: Additional Tables

Table 1.A. Number of Branded Drugs with Annual Price Changes at Various Thresholds (Average Method)

Thresholds	2013	2014	2015	2016	2017
All Brand Drugs	2238	2201	2314	2345	2475
Price Decrease	16 (0.71%)	19 (0.86%)	16 (0.69%)	19 (0.81%)	21 (0.85%)
No Price Change	993 (44.37%)	992 (45.07%)	1059 (45.76%)	1307 (55.74%)	1481 (59.84%)
Any Price Increase	1229 (54.92%)	1190 (54.07%)	1239 (53.54%)	1019 (43.45%)	973 (39.31%)
≥5%	1039 (46.43%)	1018 (46.25%)	1076 (46.50%)	852 (36.33%)	776 (31.35%)
≥10%	621 (27.75%)	541 (24.58%)	629 (27.18%)	317 (13.52%)	154 (6.22%)
≥15%	456 (20.38%)	411 (18.67%)	464 (20.05%)	185 (7.89%)	107 (4.32%)
≥20%	298 (13.32%)	296 (13.45%)	328 (14.17%)	122 (5.20%)	60 (2.42%)

Table 1.B. Number of Generic Drugs with Annual Price Changes at Various Thresholds (Average Method)

Thresholds	2013	2014	2015	2016	2017
All Generic Drugs	3446	3600	4024	4441	5025
Price Decrease	154 (4.47%)	98 (2.72%)	170 (4.22%)	277 (6.24%)	332 (6.61%)
No Price Change	2853 (82.79%)	3036 (84.33%)	3507 (87.15%)	3935 (88.61%)	4536 (90.27%)
Any Price Increase	439 (12.74%)	466 (12.94%)	347 (8.62%)	229 (5.16%)	157 (3.12%)
≥5%	378 (10.97%)	420 (11.67%)	303 (7.53%)	193 (4.35%)	126 (2.51%)
≥10%	338 (9.81%)	370 (10.28%)	276 (6.86%)	153 (3.45%)	94 (1.87%)
≥15%	298 (8.65%)	334 (9.28%)	247 (6.14%)	129 (2.90%)	85 (1.69%)
≥20%	277 (8.04%)	306 (8.50%)	220 (5.47%)	113 (2.54%)	67 (1.33%)

**Table 2.A. Number of Branded Drugs
with Annual Price Changes at Various Thresholds
(Max Change Method)**

Thresholds	2013	2014	2015	2016	2017
All Brand Drugs	2238	2201	2314	2345	2475
Price Decrease	8 (0.36%)	7 (0.32%)	10 (0.43%)	11 (0.47%)	12 (0.48%)
No Price Change	998 (44.59%)	998 (45.34%)	1063 (45.94%)	1314 (56.03%)	1487 (60.08%)
Any Price Increase	1232 (55.05%)	1196 (54.34%)	1241 (53.63%)	1020 (43.50%)	976 (39.43%)
≥5%	1100 (49.15%)	1073 (48.75%)	1123 (48.53%)	895 (38.17%)	829 (33.49%)
≥10%	667 (29.80%)	587 (26.67%)	674 (29.13%)	349 (14.88%)	171 (6.91%)
≥15%	501 (22.39%)	457 (20.76%)	500 (21.61%)	213 (9.08%)	126 (5.09%)
≥20%	331 (14.79%)	324 (14.72%)	356 (15.38%)	143 (6.10%)	71 (2.87%)

**Table 2.B. Number of Generic Drugs
with Annual Price Changes at Various Thresholds
(Max Change Method)**

Thresholds	2013	2014	2015	2016	2017
All Generic Drugs	3446	3600	4024	4441	5025
Price Decrease	79 (2.29%)	65 (1.81%)	91 (2.26%)	199 (4.48%)	217 (4.32%)
No Price Change	2921 (84.76%)	3061 (85.03%)	3580 (88.97%)	4006 (90.20%)	4636 (92.26%)
Any Price Increase	446 (12.94%)	474 (13.17%)	353 (8.77%)	236 (5.31%)	172 (3.42%)
≥5%	425 (12.33%)	462 (12.83%)	344 (8.55%)	228 (5.13%)	159 (3.16%)
≥10%	389 (11.29%)	436 (12.11%)	328 (8.15%)	197 (4.44%)	125 (2.49%)
≥15%	356 (10.33%)	401 (11.14%)	297 (7.38%)	172 (3.87%)	118 (2.35%)
≥20%	335 (9.72%)	370 (10.28%)	273 (6.78%)	157 (3.54%)	98 (1.95%)

Appendix E

Section II: Additional Tables

Drug Name (N=80)	Group	Estimated Annual Expenditure
SOLIRIS	ORPHAN	\$508,794.00
JUXTAPID	ORPHAN	\$482,217.14
KYNAMRO	ORPHAN	\$395,773.56
FABRAZYME	ORPHAN	\$321,820.20
KALYDECO	ORPHAN	\$311,503.14
FERRIPROX	ORPHAN	\$287,915.80
KORLYM	ORPHAN	\$232,206.00
NEXAVAR	SPECIALTY	\$210,524.70
XALKORI	ORPHAN	\$195,345.69
BOSULIF	ORPHAN	\$172,959.14
ELAPRASE	SPECIALTY	\$163,063.16
IMBRUVICA	SPECIALTY	\$148,188.75
SYLATRON	SPECIALTY	\$133,666.20
CINRYZE	SPECIALTY	\$132,421.92
MEKINIST	ORPHAN	\$131,182.22
YERVOY	ORPHAN	\$127,218.53
ZYTIGA	SPECIALTY	\$124,491.28
ADEMPAS	ORPHAN	\$118,656.94
THALOMID	SPECIALTY	\$115,281.32
CAPRELSA	ORPHAN	\$107,531.68
TAFINLAR	ORPHAN	\$105,099.26
STIVARGA	SPECIALTY	\$91,521.18
ISTODAX	ORPHAN	\$88,212.38
POMALYST	ORPHAN	\$79,165.51
JAKAFI	ORPHAN	\$68,544.00
BETASERON	SPECIALTY	\$65,307.18
GENOTROPIN	SPECIALTY	\$60,115.77
HUMIRA	SPECIALTY	\$58,464.44
ORENCIA	BRAND	\$55,809.38
HERCEPTIN	SPECIALTY	\$55,792.97
FUZEON	SPECIALTY	\$43,624.31
VENTAVIS	SPECIALTY	\$42,430.50
NEULASTA	SPECIALTY	\$41,540.40
FORTEO	SPECIALTY	\$40,085.52
OTEZLA	SPECIALTY	\$37,718.98
LATUDA	BRAND	\$37,211.75
MOZOBIL	SPECIALTY	\$25,450.50
THYMOGLOBULIN	SPECIALTY	\$23,768.01
INVEGA SUSTENNA	BRAND	\$17,928.79
BYETTA	BRAND	\$6,463.97
INVOKANA	BRAND	\$5,652.39

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VORICONAZOLE	GENERIC	\$5,198.21
XARELTO	BRAND	\$5,098.69
ELIQUIS	BRAND	\$5,098.33
QUTENZA	ORPHAN	\$5,025.06
TRADJENTA	BRAND	\$5,006.34
PRADAXA	BRAND	\$4,873.60
LINZESS	BRAND	\$4,709.23
VIIBRYD	BRAND	\$4,537.32
RANEXA	BRAND	\$4,341.80
MYRBETRIQ	BRAND	\$4,289.49
ZONTIVITY	BRAND	\$3,859.94
EDARBI	BRAND	\$2,334.42
DUAVEE	BRAND	\$2,048.50
PIOGLITAZONE HCL-METFORMIN HCL	GENERIC	\$1,899.64
BREO ELLIPTA	BRAND	\$1,893.65
RISPERIDONE	GENERIC	\$1,837.00
PREMARIN	BRAND	\$1,606.51
TRETINOIN	GENERIC	\$1,127.19
AZITHROMYCIN	GENERIC	\$950.15
CHANTIX	BRAND	\$802.45
RIVASTIGMINE TARTRATE	GENERIC	\$672.26
METOPROLOL TARTRATE / HYDROCHLOROTHIAZIDE	GENERIC	\$512.11
TOPIRAMATE	GENERIC	\$489.81
CARBOPLATIN	GENERIC	\$471.85
OVIDREL	SPECIALTY	\$467.28
DICLOFENAC SODIUM-MISOPROSTOL	GENERIC	\$443.13
VENLAFAXINE HCL	GENERIC	\$441.25
GABAPENTIN	GENERIC	\$401.93
ZIRGAN	ORPHAN	\$331.38
SULFASALAZINE	GENERIC	\$318.37
SERTRALINE HCL	GENERIC	\$168.74
PREPOPIK	BRAND	\$128.87
IRBESARTAN	GENERIC	\$125.29
COARTEM	ORPHAN	\$122.63
ALPRAZOLAM	GENERIC	\$96.58
OXYCODONE HCL	GENERIC	\$67.01
MEDROXYPROGESTERONE ACETATE	GENERIC	\$35.28
HYDROMORPHONE HCL	GENERIC	\$24.44
OMEPRAZOLE	GENERIC	\$12.65

Note: Shaded areas indicate those drugs that would be exempted from reporting if a threshold of \$10,000 per year is used.

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Endnotes

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