



# Rx Price Watch Report

July 2011

## Trends in Retail Prices of Generic Prescription Drugs Widely Used by Medicare Beneficiaries 2005 to 2009

Stephen W. Schondelmeyer  
*PRIME* Institute, University of Minnesota

Leigh Purvis  
AARP Public Policy Institute

# Rx Price Watch



# **Rx Price Watch Report**

July 2011

## **Trends in Retail Prices of Generic Prescription Drugs Widely Used by Medicare Beneficiaries 2005 to 2009**

By

Stephen W. Schondelmeyer  
*PRIME* Institute, University of Minnesota

Leigh Purvis  
AARP Public Policy Institute

AARP's Public Policy Institute informs and stimulates public debate on the issues we face as we age. Through research, analysis and dialogue with the nation's leading experts, PPI promotes development of sound, creative policies to address our common need for economic security, health care, and quality of life.

The views expressed herein are for information, debate, and discussion, and do not necessarily represent official policies of AARP.

#2011-12

July 2011

© 2011, AARP.

Reprinting with permission only.

AARP Public Policy Institute  
601 E Street, NW, Washington, DC 20049  
<http://www.aarp.org/ppi>

This Rx Price Watch report is a new iteration of our Rx Watchdog report series that has been tracking *manufacturer* price changes for widely used prescription drugs since 2004. The new name for this report series, Rx Price Watch, marks our switch to *retail* prices—or the amount that is actually charged to consumers (and/or insurers)—as our primary data source. Thus, while our market basket of prescription drugs widely used by Medicare Part D enrollees remains unchanged, our findings for this and future reports will be based on changes in the prices charged to consumers ages 50 and older enrolled in employer-sponsored health plans, as reported by the Thomson Reuters MarketScan® Research Databases. The addition of retail prices to our analyses will allow the AARP Public Policy Institute to assess what prices consumers are paying and whether the rebates and discounts often given to payers are being passed along to their clients.

# TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>IV</b>
<b>FINDINGS .....</b>	<b>3</b>
I. ANNUAL TRENDS IN RETAIL PRICE CHANGES FOR MOST WIDELY USED GENERIC PRESCRIPTION DRUGS .....	3
II. FIVE-YEAR CUMULATIVE IMPACT OF RETAIL PRICE CHANGES FOR WIDELY USED PRESCRIPTION DRUGS, 2005-2009 .....	6
III. RETAIL PRICE CHANGES FOR MOST WIDELY USED GENERIC PRESCRIPTION DRUGS IN 2009 .....	7
IV. RETAIL PRICE CHANGES FOR MOST WIDELY USED GENERIC PRESCRIPTION DRUGS BY MANUFACTURER AND BY THERAPEUTIC CATEGORY .....	11
<b>CONCLUDING OBSERVATIONS .....</b>	<b>15</b>
<b>APPENDIX A: DETAILED METHODOLOGY AND DESCRIPTION OF RETAIL PRICE DATA .....</b>	<b>16</b>
<b>APPENDIX B: THERAPEUTIC CATEGORY ACRONYMS .....</b>	<b>21</b>

## LIST OF FIGURES

FIGURE 1: AVERAGE ANNUAL PERCENT CHANGE IN RETAIL PRICES FOR WIDELY USED GENERIC PRESCRIPTION DRUGS DECREASED IN 2009 .....	3
FIGURE 2: ROLLING AVERAGE AND POINT-TO-POINT CHANGES IN RETAIL PRICES FOR WIDELY USED GENERIC PRESCRIPTION DRUGS WERE WELL BELOW INFLATION BETWEEN 2005 AND 2009 .....	4
FIGURE 3: THE AVERAGE ANNUAL RETAIL COST OF THERAPY FOR MOST WIDELY USED GENERIC PRESCRIPTION DRUGS WAS \$234 PER YEAR IN 2009 .....	5
FIGURE 4: ALMOST ONE-THIRD OF THE MOST WIDELY USED GENERIC PRESCRIPTION DRUGS HAD RETAIL PRICE DECREASES OF GREATER THAN 10 PERCENT IN 2009 .....	7
FIGURE 5: TEN WIDELY USED GENERIC DRUGS HAD RETAIL PRICE DECREASES OF 25 PERCENT OR MORE IN 2009 .....	8
FIGURE 6: FOUR WIDELY USED GENERIC DRUGS HAD RETAIL PRICE INCREASES IN EXCESS OF 25 PERCENT IN 2009 .....	9
FIGURE 7: RETAIL PRICES FOR WIDELY USED GENERIC DRUG PRODUCTS DECREASED FOR ALL BUT ONE DRUG MANUFACTURER IN 2009 .....	12
FIGURE 8: FIVE THERAPEUTIC CATEGORIES HAD RETAIL PRICE INCREASES THAT EXCEEDED THE RATE OF GENERAL INFLATION IN 2009 .....	14

## LIST OF TABLES

TABLE 1: ALL OF THE TOP 25 GENERIC PRESCRIPTION DRUG PRODUCTS HAD RETAIL PRICE CHANGES IN 2009 .....	10
---	----

## EXECUTIVE SUMMARY

AARP's Public Policy Institute finds that retail prices for generic prescription drugs widely used by Medicare beneficiaries fell between 2005 and 2009; this is consistent with the pattern that we have seen since initiating our ongoing series of studies on prescription drug prices in 2004. In 2009, the retail prices for 185 generic prescription drugs widely used by Medicare beneficiaries fell by an average of 7.8 percent. The general inflation rate, according to the Consumer Price Index for all items, fell by 0.3 percent over the same period.

This Rx Price Watch report is a new iteration of our Rx Watchdog report series that has been tracking *manufacturer* price changes for widely used prescription drugs since 2004. The new name for this report series, Rx Price Watch, marks our switch to *retail* prices—or the amount that is actually charged to consumers (and/or insurers)—as our primary data source. Thus, while our market basket of prescription drugs widely used by Medicare Part D enrollees remains unchanged, our findings for this and future reports will be based on changes in the prices charged to consumers ages 50 and older enrolled in employer-sponsored health plans, as reported by the Thomson Reuters MarketScan® Research Databases. The addition of retail prices to our analyses will allow the AARP Public Policy Institute to assess what prices consumers are paying and whether the rebates and discounts often given to payers are being passed along to their clients.

This report presents annual and five-year cumulative price changes through the end of 2009, using both rolling average and point-to-point estimates (see Appendix A). The first set of findings shows *annual* rates of change in retail prices for widely used generic drugs from 2005 through 2009, using both rolling average and point-to-point measures. The rolling average measure also is used to examine the distribution of price changes as well as differences in average percentage retail price changes for individual manufacturers and by therapeutic categories. The second set of findings summarizes the *cumulative* impact of retail drug price increases that have taken place during the five-year period from 2005 through 2009.

### Findings

- In 2009, the retail prices for 185 generic prescription drugs widely used by Medicare beneficiaries fell by an average of 7.8 percent. The general inflation rate fell by 0.3 percent over the same period.
- On average, retail prices for 164 generic drugs that have been on the market since the beginning of the study (December 2004) decreased by 35.0 percent by December 2009, compared to the general inflation rate, which increased by 13.3 percent during the same period.
- The average annual cost for one generic medication was about \$234 in 2009. For a consumer who takes three generic prescriptions on a chronic basis, the average

annual cost of therapy for the generic drug products used to treat chronic conditions fell by \$612 between 2005 and 2009.

- All of the 185 generic prescription drug products in the study's market basket had retail price changes during 2009; 159 drug products (86 percent) experienced a price *decrease*, and the remaining 26 (14 percent) experienced a price *increase*.
- Eighteen of the 19 drug manufacturers with at least two drug products in the study's market basket had an average decrease in retail price in 2009. Three manufacturers had an average annual retail price decrease of 20.0 percent or more in 2009.
- Thirty of the 35 therapeutic categories of generic drug products had an average annual retail price decrease in 2009, ranging from 0.1 percent to 32.4 percent. Five therapeutic categories had an average annual retail price increase, ranging from 1.5 percent to 21.0 percent.

### **Concluding Observations**

The findings of this report show that the retail prices of most of the generic drug products in the market basket are decreasing. Many of these decreases are substantial.

These findings also highlight the different pricing dynamics in the generic drug market: while the retail prices for 185 generic prescription drugs widely used by Medicare beneficiaries fell by an average of 7.8 percent in 2009, a previous Rx Price Watch report found that the retail prices for 217 brand name prescription drugs widely used by Medicare beneficiaries increased by an average of 8.3 percent over the same time period.

More than \$100 billion in annual brand-name drug sales are expected to face new generic competition over the next few years, which equates to about one-third of the annual spending on all prescription drugs in the United States. In 2011 alone, drugs that have generated more than \$17 billion in total sales will likely lose market exclusivity. Given that generic drug prices are, on average, 85 percent lower than the price of the brand name counterpart before it went off patent, these expirations will result in substantial savings.

Low-cost generic drugs are a means of helping consumers and third-party payers reduce their prescription drug costs, particularly when prices remain stable or decrease. The availability of these therapeutically equivalent substitutes is especially important in view of rapid health care cost increases of recent years, a substantial share of which is attributed to prescription drugs.

### **Methodology**

The list of prescription drugs that are widely used by Medicare beneficiaries is based on the 300 most widely dispensed drug products (including both generic and brand name drugs), the 300 drug products with the highest sales levels, and the 300 drug products

with the highest number of days of therapy provided among the prescriptions adjudicated by a Medicare Part D plan provider. UnitedHealthcare-PacifiCare provided Medicare Part D coverage in 2006, and is also the organization that insures the AARP Medicare Rx plans. This Medicare Part D plan provider supplied data for all prescriptions provided to Medicare Part D enrollees in 2006. Each drug product represents a unique combination of active chemical ingredient, strength, dosage form, package size, and manufacturer (for example, Nexium (esomeprazole magnesium) 40 mg, capsule, bottle of 30, AstraZeneca).

The three market baskets that are used in this report series (brand name, generic, and specialty drugs) account for 81.6 percent of all prescription drug expenditures, 79.2 percent of all prescriptions dispensed, and 91.2 percent of all days of therapy provided in 2006 by a Medicare Part D plan provider.

Although the market basket studied was identified using data from a Medicare Part D plan provider, changes in prices were measured using retail third party prices as published by the Thomson Reuters MarketScan® Research Databases. The average annual change in retail prices was calculated for each individual drug product as a 12-month rolling average. Aggregate estimates of retail price or change in retail prices were calculated by weighting each drug product's value by its share among the Medicare Part D plan provider's 2006 annual sales and utilization data. The number of drugs included in the analysis for a given year varies because not all drugs in the sample were on the market prior to 2006.

# **RX PRICE WATCH REPORT: TRENDS IN RETAIL PRICES OF GENERIC PRESCRIPTION DRUGS USED BY MEDICARE BENEFICIARIES 2005 TO 2009**

AARP's Public Policy Institute finds that retail prices for generic prescription drugs widely used by Medicare beneficiaries fell between 2005 and 2009; this is consistent with the pattern that we have seen since initiating our ongoing series of studies on prescription drug prices in 2004.<sup>1</sup> In 2009, the retail prices for 185 generic prescription drugs widely used by Medicare beneficiaries fell by an average of 7.8 percent.<sup>2</sup> The general inflation rate, according to the Consumer Price Index for all items,<sup>3</sup> fell by 0.3 percent over the same period.

This Rx Price Watch report is a new iteration of our Rx Watchdog report series that has been tracking *manufacturer* price changes for widely used prescription drugs since 2004. The new name for this report series, Rx Price Watch, marks our switch to *retail* prices—or the amount that is actually charged to consumers (and/or insurers)—as our primary data source. Thus, while our market basket of prescription drugs widely used by Medicare Part D enrollees remains unchanged, our findings for this and future reports will be based on changes in the prices charged to consumers aged 50 and older enrolled in employer-sponsored health plans, as reported by the Thomson Reuters MarketScan® Research Databases.<sup>4</sup> This change will allow the AARP Public Policy Institute to assess what prices consumers (and/or insurers) are paying and whether the rebates and discounts sometimes given to third party drug plans are being passed along to their clients.

Generic drugs have long been a means of helping consumers and third-party payers reduce prescription drug costs.<sup>5</sup> Generic drugs account for more than two-thirds of all

---

<sup>1</sup> Previous reports from this series can be found on the AARP Web site at <http://www.aarp.org/rxpricewatch>.

<sup>2</sup> In contrast, a previous Rx Price Watch report found that the retail prices for 217 brand name prescription drugs widely used by Medicare beneficiaries increased by an average of 8.3 percent in 2009. S.W. Schondelmeyer and L. Purvis, "Trends in Retail Prices of Brand Name Prescription Drugs Widely Used by Medicare Beneficiaries 2005 to 2009," AARP Public Policy Institute, Report # 2010-06, August 2010.

<sup>3</sup> The general inflation rate, for purposes of this report, is measured by the Consumer Price Index-All Urban Consumers for All Items (seasonally adjusted) and published by Bureau of Labor Statistics series CUSR0000SA0 (CPI-U).

<sup>4</sup> See Appendix A for a more detailed description of the retail data. The Thomson Reuters MarketScan® Research Databases, a family of databases, contains individual-level health care claims, lab test results, and hospital discharge information from large employers, managed care organizations, hospitals, Medicare, and Medicaid programs. The Healthcare & Science business of Thomson Reuters constructs the MarketScan® Research Databases by collecting data from employers, health plans, and state Medicaid agencies and placing them into databases (D. M. Adamson, S. Chang, and L. G. Hansen, "White Paper: Health Research Data for the Real World: The MarketScan Databases," Thomson Healthcare, January 2008).

<sup>5</sup> A generic drug is defined by the U.S. Food and Drug Administration (FDA) as a "chemical clone" that has the same active ingredients as its FDA-approved brand name counterpart and that can be expected to have the same therapeutic effect as its brand name counterpart (FDA, Center for Drug Evaluation and Research, *From Test Tube to Patient: Improving Health through Human Drugs*, September 1999). For the purposes of this analysis, a generic drug is any FDA-approved product that is therapeutically equivalent to a product marketed by the original new drug application (NDA) holder. For the most part, this includes products with an abbreviated NDA (ANDA). It also includes some products that have an NDA that was not the original NDA for the chemical entity, as well as "branded generics" (i.e., generic drug products that are marketed using a brand name (e.g., Levoxyl 100 mcg tablets).

retail prescriptions in the United States, but, because they are priced substantially below their therapeutically equivalent brand name counterparts, they account for a much smaller dollar share (about 16 percent) of U.S. retail prescription drug purchases.<sup>6</sup> The availability of lower-cost generic drugs is particularly important in view of rapid health care cost increases of recent years, a substantial share of which is attributed to prescription drugs.

This study reports on the extent to which retail prices for specific *generic* drugs changed between 2005 and 2009. Previous reports by the AARP Public Policy Institute have documented retail price changes of specific *brand name* drugs that are widely used by Medicare beneficiaries; a forthcoming report will focus on retail price changes of specific *specialty* drugs. Generic drugs are analyzed and reported separately from brand name and specialty drugs because the dynamics of retail pricing in the generic drug market differ substantially from those in the brand name and specialty markets. In particular, when there are two or more generic versions of the same drug product on the market, companies compete primarily on price,<sup>7</sup> because generic firms are selling homogeneous goods, pharmacies and wholesalers can use their leverage as purchasers to encourage price (or price spread) competition between firms.<sup>8</sup> By contrast, in the market for single source brand name and specialty drugs without therapeutically equivalent generic substitutes, manufacturers have monopolies for their products and compete very little, if at all, on price.

This report presents annual and five-year cumulative price changes through the end of 2009, using both rolling average and point-to-point estimates (see Appendix A). The first set of findings shows *annual* rates of change in retail prices for widely used generic drugs from 2005 through 2009. The rolling average measure also is used to examine the distribution of price changes as well as differences in average percentage retail price changes for individual manufacturers and by therapeutic categories. The second set of findings summarizes the *cumulative* impact of retail drug price increases that have taken place during the five-year period from 2005 through 2009.

---

<sup>6</sup> Generic Pharmaceutical Industry Association, *Facts-at-a-Glance*. Available at: <http://www.gphaonline.org/about-gpha/about-generics/facts> (accessed May 24, 2011).

<sup>7</sup> U.S. Food and Drug Administration, *Generic Competition and Drug Prices*. Available at: <http://www.fda.gov/AboutFDA/CentersOffices/CDER/ucm129385.htm> (accessed May 24, 2011).

<sup>8</sup> When a pharmacy (or wholesaler) chooses the version of generic drug product to stock, it may take into account factors in addition to the price and price “spread” of a drug (the difference between the price the pharmacy pays for the product and the price at which it sells the product) including, but not limited to, the reputation of the generic firm, breadth of product line, levels of service, in-stock rates, stability of supply over time, and availability through a wholesaler versus direct from the generic firm.

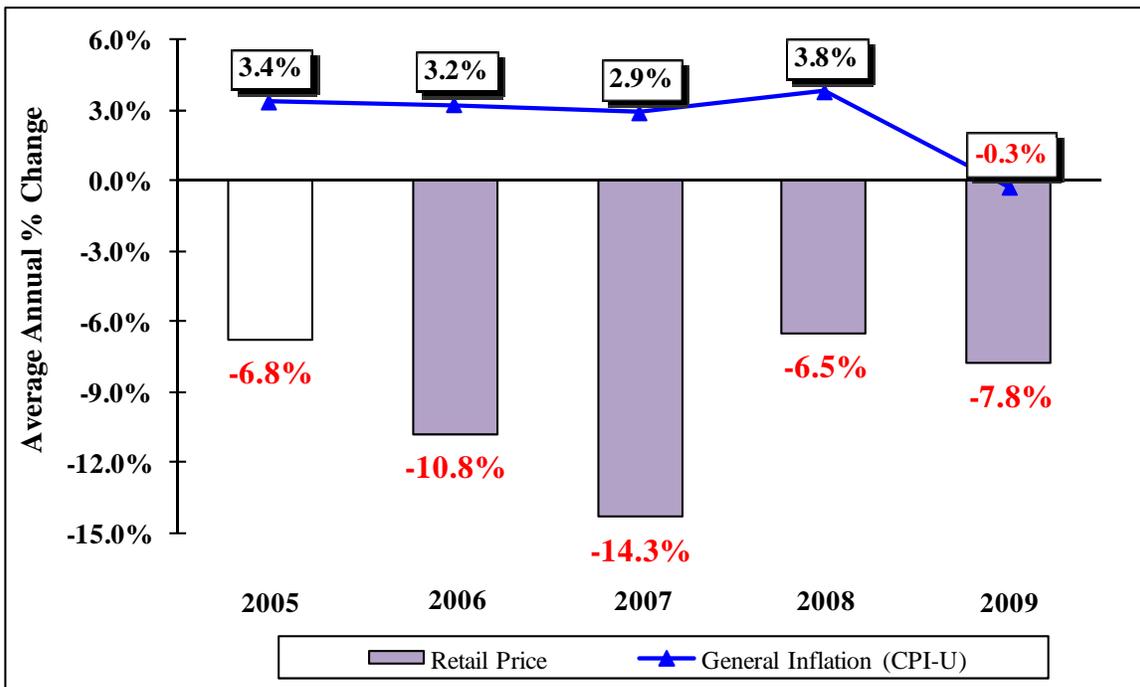
## FINDINGS

### I. Annual Trends in Retail Price Changes for Most Widely Used Generic Prescription Drugs

#### Annual percent change in retail prices

On average, retail prices for the 185 generic drug products most widely used by Medicare beneficiaries fell by 7.8 percent in 2009, when measured as a 12-month rolling average and weighted by actual 2006 sales to Medicare Part D beneficiaries (Figure 1).

**Figure 1: Average Annual Percent Change in Retail Prices for Widely Used Generic Prescription Drugs Decreased in 2009**



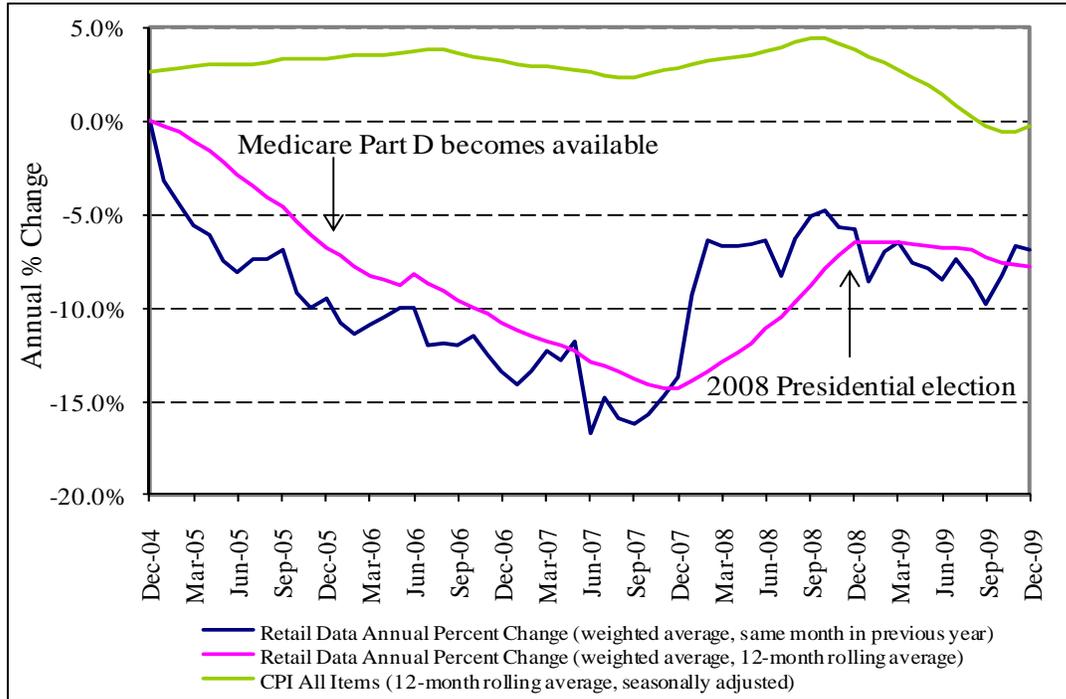
Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Thomson Reuters MarketScan® Research Databases.

- The average annual price changes in 2006 and 2007 (-10.8 and -14.3 percent, respectively) decreased substantially more than the rates of decrease for retail prices seen in either 2005 (-6.8 percent) and 2008 (-6.5 percent).
- Furthermore, the average annual decreases in retail price from 2005 through 2008 occurred during a period of increases in the rate of general inflation. The annual rate of general inflation ranged from 2.9 percent to 3.8 percent during this four-year period.

The average annual retail price change reported in Figure 1 is a measure that, by averaging annual point-to-point price changes for each month in a 12-month period (referred to as a *rolling average* change), smoothes over the entire year the annual amount of change in retail price that occurs for a single month (referred to as an annual *point-to-point* change). The percent change in price compared with the same month in the previous year has been plotted along with the 12-month rolling average to allow more

detailed examination of the rate and timing of retail price changes over the entire study period (Figure 2). Figure 2 shows that, on average, the rate of decrease in retail prices for generic drugs accelerated in 2006 and 2007 and has since slowed. Throughout the entire time that the Medicare Part D prescription drug program has been in operation, the rate of change in retail prices for widely used generic drugs has been well below zero.

**Figure 2: Rolling Average and Point-to-Point Changes in Retail Prices for Widely Used Generic Prescription Drugs Were Well Below Inflation Between 2005 and 2009**

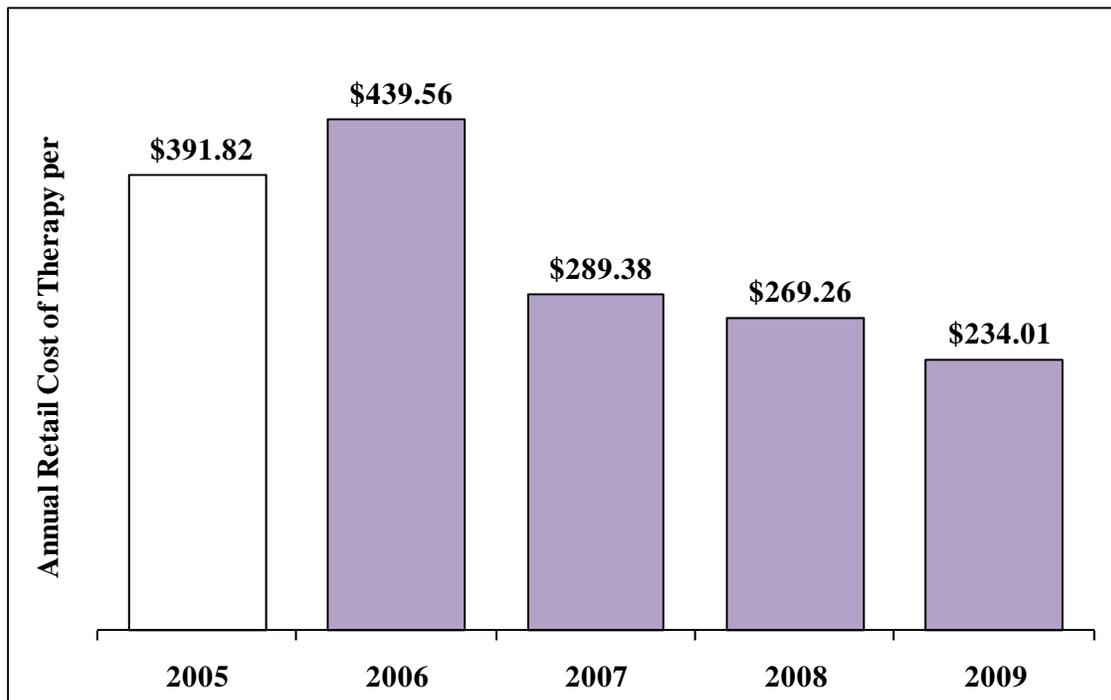


Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Thomson Reuters MarketScan® Research Databases.

### Annual retail cost of therapy

Retail prices for the 154 most widely used generic drugs used for treating chronic conditions (out of a total market basket of 185 drugs) were converted into average annual costs of therapy (Figure 3).<sup>9</sup>

**Figure 3: The Average Annual Retail Cost of Therapy for Most Widely Used Generic Prescription Drugs Was \$234 per Year in 2009**



Note: Shaded bars indicate years when Medicare Part D was operational.

Does not include 31 drug products typically used for acute conditions or for less than one year.

Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Thomson Reuters MarketScan® Research Databases.

- The average annual retail cost of therapy for widely used generic drugs has been steadily declining since 2006.

An older American who takes three prescription drugs is likely to incur an average annual retail cost of therapy of \$702 in 2009, assuming that the consumer uses generic drugs for these chronic conditions. The annual cost of therapy was substantially lower (40.3 percent) than the average annual retail cost in the year prior to the implementation of Medicare Part D, which was about \$1,175 per year in 2005.

---

<sup>9</sup> The figures in this section reflect the total retail price for consumers enrolled in employer-sponsored health plans and not simply the out-of-pocket cost a consumer would face at the drugstore.

## **II. Five-Year Cumulative Impact of Retail Price Changes for Widely Used Prescription Drugs, 2005-2009**

AARP has tracked generic drug retail price changes for the five-year period from December 31, 2004, to December 31, 2009. Almost 90 percent (164 of 185) of the widely used drugs in the generic market basket have been on the market for the entire five-year period (the end of 2004 through the end of 2009). The cumulative effect of retail price changes over this five-year period is reported.

### Five-year cumulative percent change in retail prices

- Eighty-nine percent (164 of 185) of the most widely used drugs in the market basket for this analysis have been on the market for the entire five-year period from the end of 2004 to the end of 2009. Cumulatively, the average (five-year) change in retail prices for these 164 generic drug products decreased 35.0 percent, compared with a 13.3 percent increase for general inflation.<sup>10</sup>

Eighty-five percent (140 of 164) of the drug products that have been on the market since the end of 2004 are used to treat chronic conditions. Cumulatively, the average annual cost of therapy for these drug products was \$204 lower at the end of 2009 than five years earlier, assuming that the typical 50+ consumer used generic drugs for chronic conditions. For a consumer who takes three generic medications, this translates into an average decrease in therapy costs of \$612 between December 31, 2004, and December 31, 2009. This decrease in therapy cost does not capture the substantial savings a consumer receives initially by switching from a brand name product to a generic product once the brand name drug loses its patent.

---

<sup>10</sup> The five-year average cumulative growth rate for all generic drugs in the market basket was -15.8 percent. This number was calculated by compounding the average annual growth rate for each year from 2005 to 2009.

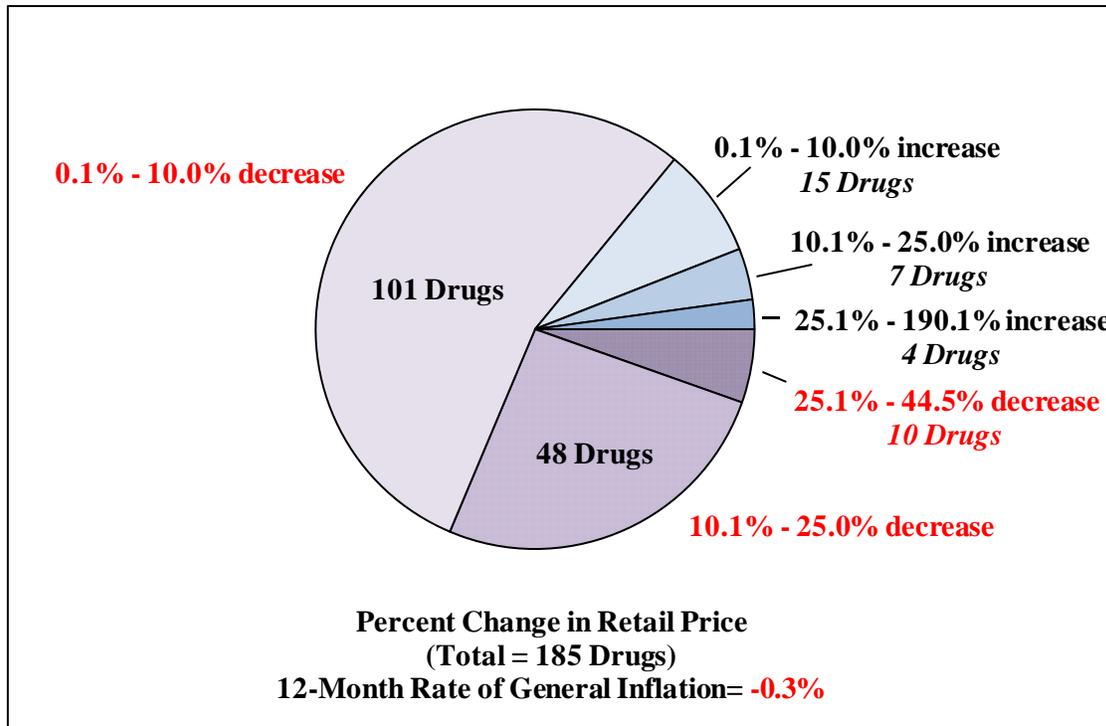
### III. Retail Price Changes for Most Widely Used Generic Prescription Drugs in 2009

#### Distribution of retail price changes

All 185 of the most widely used generic prescription drug products in this study’s market basket had a retail price change during 2009, when measured as a 12-month rolling average (Figure 4).

- In 2009, the annual retail price decreased for 159 (85.9 percent) of the 185 most widely used generic drug products.
- Of the 159 generic drug products with an annual retail price decrease, 101 (54.6 percent) had a price decrease between 0.1 percent and 10.0 percent, 48 (25.9 percent) had a price decrease between 10.1 percent and 25.0 percent, and 10 (5.4 percent) had a price decrease of more than 25.1 percent.
- Annual retail price increases for the remaining 26 drug products (14.1 percent) met or exceeded the rate of general inflation (-0.3 percent) in 2009. 15 products (8.1 percent) had a price increase between 0.1 percent and 10.0 percent and 11 products (5.9 percent) had a price increase of more than 10.1 percent.

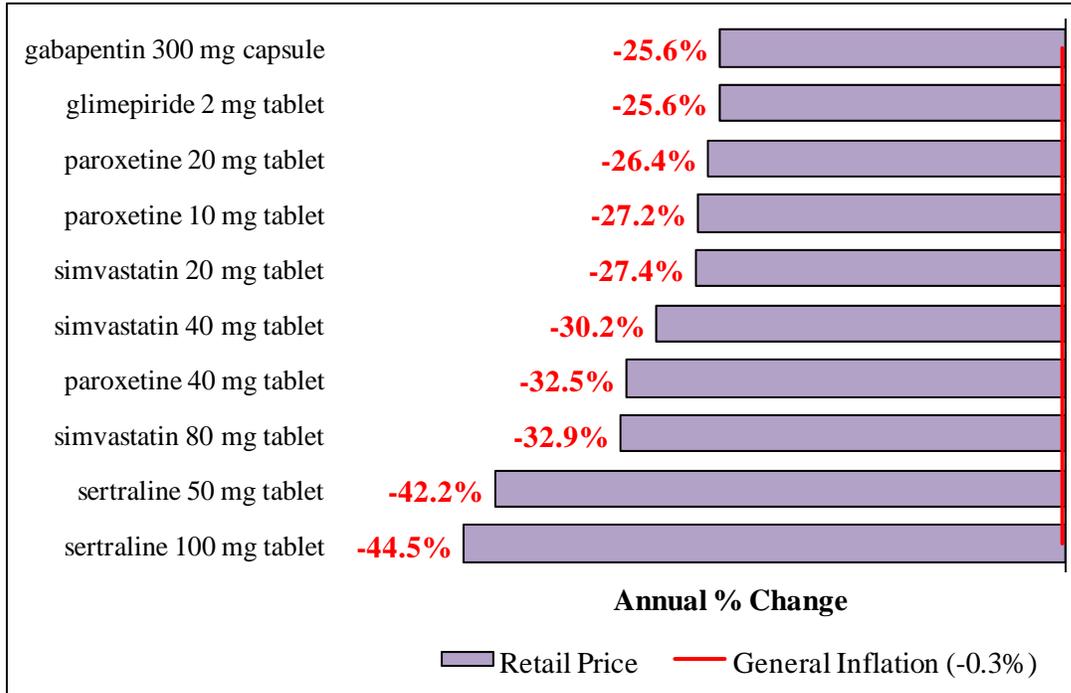
**Figure 4: Almost One-Third of the Most Widely Used Generic Prescription Drugs Had Retail Price Decreases of Greater Than 10 Percent in 2009**



Prepared by the AARP Public Policy Institute and the PRIME Institute, University of Minnesota, based on data from Thomson Reuters MarketScan® Research Databases.

- Ten widely used generic drug products had retail price decreases that were greater than 25 percent in 2009 (Figure 5). These drugs are used to treat depression (sertraline and paroxetine), high cholesterol (simvastatin), diabetes (glimepiride) and seizures (gabapentin).

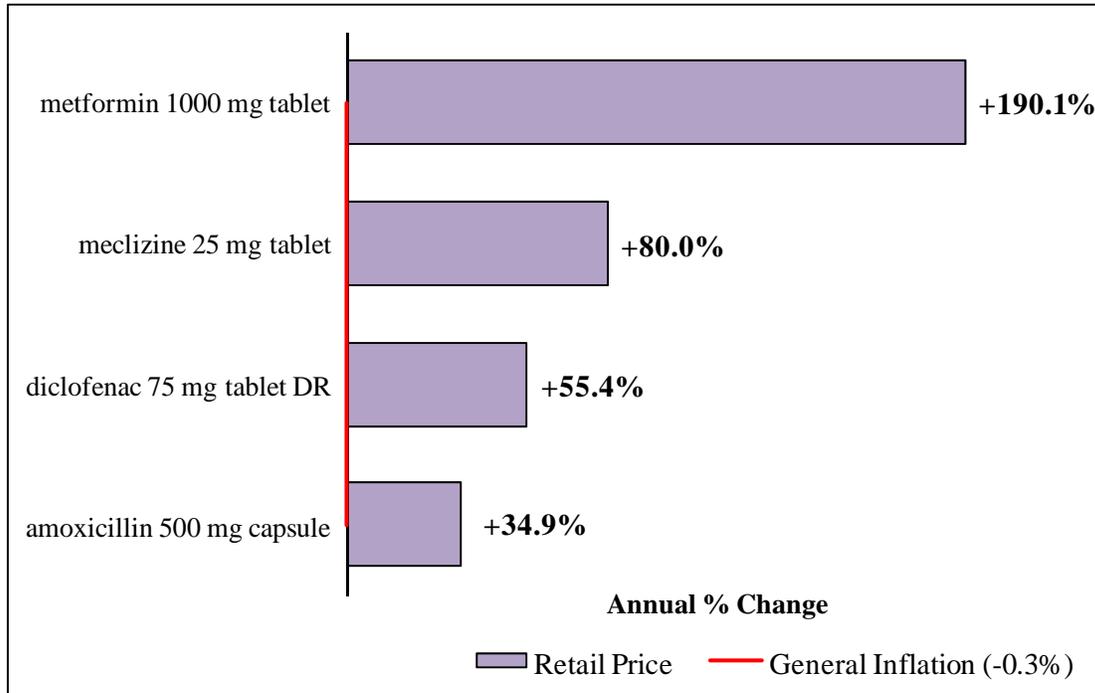
**Figure 5: Ten Widely Used Generic Drugs Had Retail Price Decreases of 25 Percent or More in 2009**



Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Thomson Reuters MarketScan® Research Databases.

- Four widely used generic drug products had retail price increases that were greater than 25 percent in 2009 (Figure 6). These drugs are used to treat diabetes (metformin), nausea (meclizine), pain (diclofenac), and infections (amoxicillin).

**Figure 6: Four Widely Used Generic Drugs Had Retail Price Increases in Excess of 25 Percent in 2009**



Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Thomson Reuters MarketScan® Research Databases.

Table 1 shows retail price changes among the 25 generic drug products with the greatest sales in 2006. All 25 drugs had price changes during 2009. 23 out of the 25 drug products experienced a price decrease. Only two of these 25 top-selling generic drug products had a retail price increase (pravastatin 40 mg tablet and metformin 1000 mg tablet) in 2009.

**Table 1: All of the Top 25 Generic Prescription Drug Products Had Retail Price Changes in 2009**

Rank by Sales among Study Market Basket*	Product Name, Strength, and Dosage Form	Package Size	Manufacturer	Therapeutic Class	Retail Price Per Day	Annual Percent Change in Retail Price
1	simvastatin 20 mg tablet	30	Teva	Cholesterol Agents (HMG Co-A)	\$0.40	-27.4%
2	simvastatin 40 mg tablet	90	Teva	Cholesterol Agents (HMG Co-A)	\$0.40	-30.2%
3	omeprazole 20 mg capsule	1000	Sandoz	Ulcer Drugs	\$0.75	-11.4%
4	metformin 500 mg tablet	100	Teva	Antidiabetics, Oral	\$0.32	-17.1%
5	fentanyl 100 mcg/hr patch	5	Sandoz	Analgesics, Opioid	\$9.75	-0.5%
6	gabapentin 300 mg capsule	100	Greenstone	Anticonvulsants	\$0.77	-25.6%
7	lisinopril 20 mg tablet	100	Sandoz	Antihypertensives (ACEs)	\$0.27	-7.8%
8	fexofenadine 180 mg tablet	100	Teva	Antihistamines, Non-Sedating	\$1.36	-7.3%
9	Klor-Con M 20 meq tablet ER	100	Upsher-Smith	Minerals & Electrolytes	\$0.61	-2.4%
10	pravastatin 40 mg tablet	90	Teva	Cholesterol Agents (HMG Co-A)	\$0.76	14.8%
11	azithromycin 250 mg tablet	6	Greenstone	Antibiotics	\$4.07	-7.8%
12	fentanyl 50 mcg/hr patch	5	Sandoz	Analgesics, Opioid	\$5.12	-0.9%
13	lisinopril 40 mg tablet	100	Sandoz	Antihypertensives (ACEs)	\$0.33	-5.7%
14	lisinopril 10 mg tablet	100	Sandoz	Antihypertensives (ACEs)	\$0.23	-10.3%
15	megestrol acetate 40 mg/ml susp	240	Par	Antineoplastics	\$3.50	-18.9%
16	sertraline 100 mg tablet	30	Teva	Antidepressants (SSRIs)	\$0.41	-44.5%
17	sertraline 50 mg tablet	30	Teva	Antidepressants (SSRIs)	\$0.41	-42.2%
18	gabapentin 600 mg tablet	100	Greenstone	Anticonvulsants	\$1.61	-24.6%
19	fentanyl 75 mcg/hr patch	5	Sandoz	Analgesics, Opioid	\$7.53	-0.7%
20	metformin 1000 mg tablet	100	Sandoz	Antidiabetics, Oral	\$0.42	190.1%
21	amiodarone 200 mg tablet	60	Sandoz	Other, Antiarrhythmics	\$0.62	-19.3%
22	propoxyphene-N/APAP 100-650 tablet	500	Teva	Analgesics, Opioid Combinations	\$0.63	-4.6%
23	lovastatin 20 mg tablet	60	Actavis Elizabeth	Cholesterol Agents (HMG Co-A)	\$0.52	-19.6%
24	hydrocodone/APAP 5-500 mg tablet	500	Mallinckrodt Pharm	Analgesics, Opioid Combinations	\$0.74	-2.9%
25	tramadol HCl 50 mg tablet	1000	Teva	Analgesics, Opioid	\$0.55	-4.8%
<b>General rate of inflation (as measured by growth in CPI-U)</b>						<b>-0.3%</b>

\*Ranking based on prescription payments made by the Medicare Part D plan provider during 2006.

See Appendix B for explanation of therapeutic category acronyms.

Prepared by the AARP Public Policy Institute and the PRIME Institute, University of Minnesota, based on data from Thomson Reuters MarketScan® Research Databases.

- Teva's sertraline 100 mg tablets had the greatest annual percent decrease (-44.5 percent) in retail price during 2009 among the top 25 generic drug products with the greatest sales in 2006.
- Twelve of the top 25 drug products that had decreases in retail price of more than 10 percent in 2009.

- The price of Sandoz’s metformin 1000 mg tablet increased 190.1 percent, a sharp contrast to the rate of general inflation in 2009 (-0.3 percent). Notably, a study was released in early 2009 that reported that metformin may have long-term benefits in patients with type 2 diabetes.

#### **IV. Retail Price Changes for Most Widely Used Generic Prescription Drugs by Manufacturer and by Therapeutic Category**

There were 19 generic drug manufacturers<sup>11</sup> each with at least two drug products (at the NDC level) among the 185 most widely used generic drugs. These 19 manufacturers supplied 181 drug products that accounted for more than 97 percent of drug sales and prescriptions dispensed among the overall market basket of 185 generic drugs. Another four drug products from four different generic drug firms with one drug product per firm were grouped together in an “All Others” category, resulting in a total of 20 reported drug manufacturer categories.

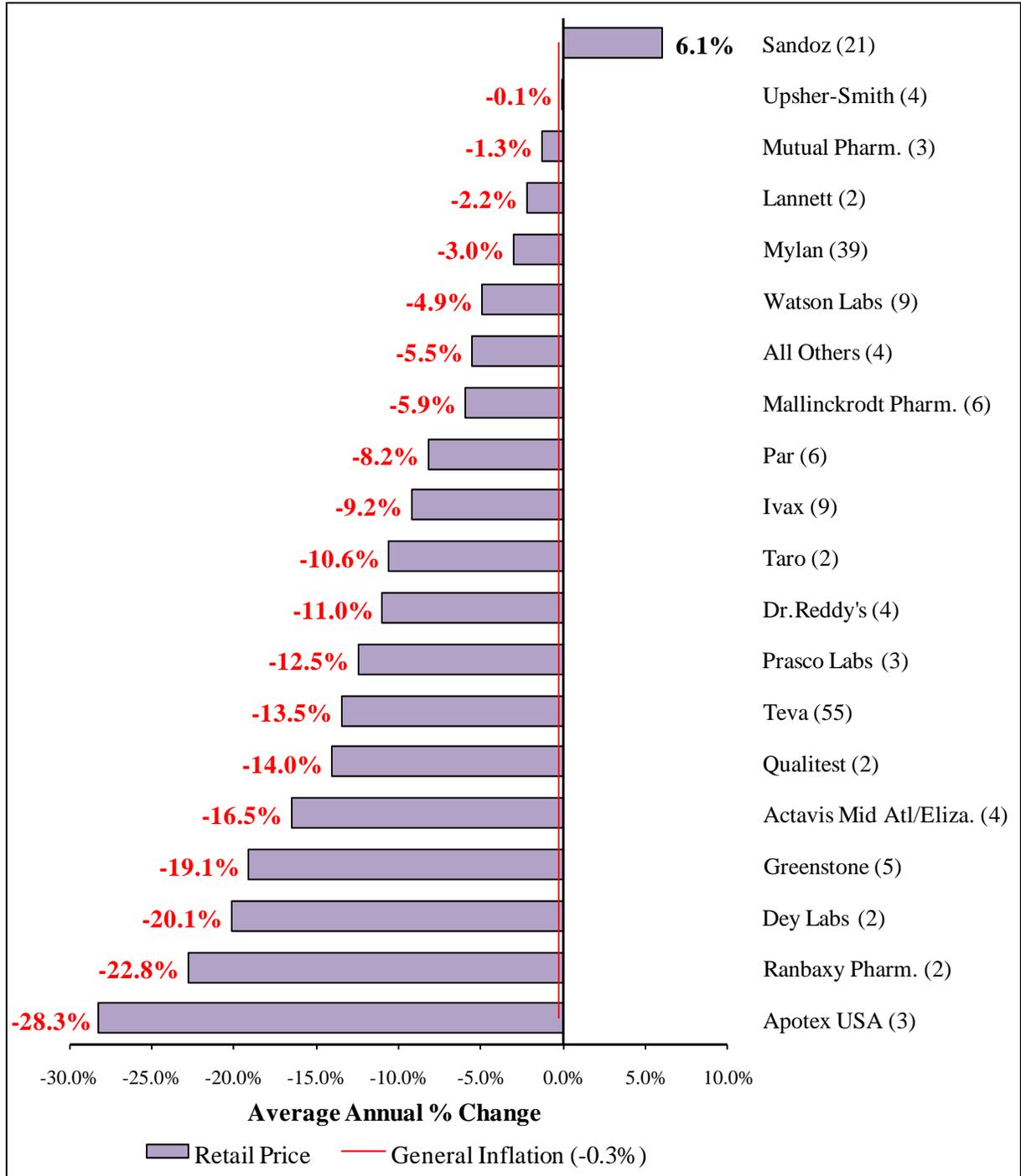
Nineteen drug manufacturers had at least two generic drug products in the study’s market basket of widely used generic drugs. The weighted average annual change in price decreased for all but one drug manufacturer in 2009 (Figure 7).

- The only generic manufacturer with an average annual increase in retail prices—Sandoz—had an average annual increase in price of 6.1 percent, considerably higher than the rate of general inflation in 2009 (-0.3 percent).
- Over one-half of the drug manufacturers (10 of 19) had average annual retail price decreases of more than 10 percent in 2009 for their generic drug products in the market basket.
- Three manufacturers—Dey Laboratories, Ranbaxy Pharmaceuticals, and Apotex USA—had average price decreases of more than 20.0 percent. The average decreases in retail price for these generic drug manufacturers in 2009 were 20.1 percent, 22.8 percent, and 28.3 percent, respectively.

---

<sup>11</sup> If a listed manufacturer is a division of another firm, its drugs are defined as being marketed by the parent firm. This includes cases where the firm marketing a drug product may have changed over time due to mergers and acquisitions, divestitures of specific drug products, or for other reasons.

**Figure 7: Retail Prices for Widely Used Generic Drug Products Decreased For All But One Drug Manufacturer in 2009**



Note: Manufacturers with fewer than two drug products in the 2006 market basket of most widely used generic prescription drugs are included in the "All Others" category. The number in parentheses after a manufacturer's name indicates the number of drug products in the market basket for that manufacturer. The general inflation rate is based on CPI-U. Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Thomson Reuters MarketScan® Research Databases.

Thirty-two therapeutic categories,<sup>1</sup> each containing two or more drug products from the market basket, together accounted for 174 of the total 185 drug products in the market basket. The remaining 11 drug products with other therapeutic uses were grouped together in an “Other Therapeutic Agents” category, resulting in a total of 33 reported therapeutic categories.

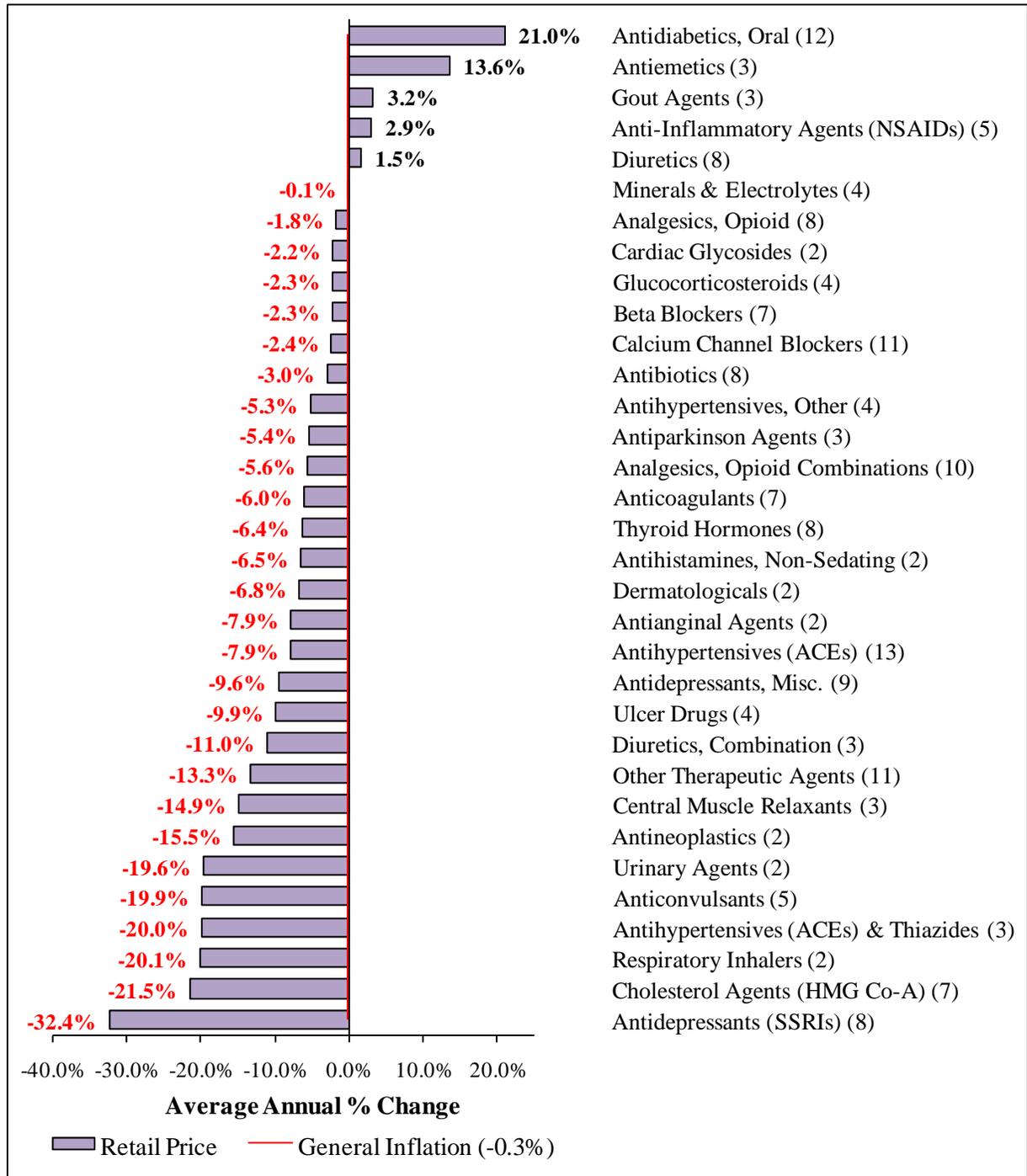
Five of the 33 therapeutic categories of generic drug products in the market basket had increases in average retail prices in 2009. All five of these categories with price increases had increases that exceeded the rate of general inflation (-0.3 percent) during 2009 (Figure 8).

- The two therapeutic categories with the highest increases in average retail price—oral antidiabetics and antiemetics—had average annual retail price increases of 21.0 percent and 13.6 percent, respectively.
- Eighteen of the 32 therapeutic categories had decreases in average retail prices of less than 10 percent during 2009. Another seven therapeutic categories—including the Other Therapeutic Agents category—had average retail price decreases of between 10 percent and 19.9 percent during the same time period.
- The four therapeutic categories with retail price decreases of 20 percent or more—antihypertensives (ACEs) and thiazides, respiratory inhalers, cholesterol agents (HMG Co-A), and antidepressants (SSRIs)—had average decreases in prices that ranged between 20.0 percent and 32.4 percent in 2009.

---

<sup>1</sup> The therapeutic categories used in this study were assigned based on an intermediate level of the GPI code that specifies the groupings of similar chemical entities such as “Calcium Channel Blockers.” When two or more drug products at the NDC level in the market basket were in the same intermediate GPI code category, the category was reported separately in the therapeutic category analysis.

**Figure 8: Five Therapeutic Categories Had Retail Price Increases That Exceeded the Rate of General Inflation in 2009**



Note: See Appendix B for explanation of therapeutic category acronyms. Therapeutic categories with fewer than two drug products in the 2006 market basket of most widely used generic prescription drugs are included in the “Other Therapeutic Agents” category. The number in parentheses after a therapeutic category indicates the number of drug products in the market basket for that therapeutic category. The general inflation rate is based on CPI-U.

Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Thomson Reuters MarketScan® Research Databases.

## CONCLUDING OBSERVATIONS

Retail drug price changes can have a direct impact on costs borne by Medicare Part D plans and enrollees. Low-cost generic drugs are a means of helping consumers and third-party payers reduce their prescription drug costs. The availability of these therapeutically equivalent generic substitutes is particularly important in view of rapid health care expenditure increases of recent years, a substantial share of which is attributed to prescription drugs.

This study finds that, in 2009, retail prices changed for all of the 185 generic prescription drug products most widely used by Medicare Part D enrollees. In 2009, the retail prices for 185 generic prescription drugs widely used by Medicare beneficiaries fell by an average of 7.8 percent. The general inflation rate, according to the Consumer Price Index for all items, fell by 0.3 percent over the same period.

The cumulative effect of these changes in retail price can be considerable. On average, retail prices of the 164 most widely used prescription drug products that have been on the market since the end of 2004 have *decreased* by 35.0 percent during the subsequent five-year period (2005 through 2009), while the general rate of inflation was 13.3 percent over the same time period. For a consumer who takes three generic prescriptions on a chronic basis, the average annual retail cost of therapy for these three generic drug products would have fallen by \$612 from 2005 to 2009.

All 185 generic prescription drug products in the study's market basket had a retail price change during 2009; 159 drug products experienced a price *decrease* and the remaining 26 drug products experienced a price *increase*. While average annual retail prices for generic drugs *decreased* for most manufacturers and in most therapeutic categories, one generic manufacturer and five therapeutic categories experienced an average annual *increase* in retail price.

More than \$100 billion in annual brand-name drug sales will be at risk for generic competition over the next few years, which equates to about one-third of the annual spending on outpatient prescription drugs in the U.S.<sup>13</sup> In 2011 alone, drugs that generated over \$17 billion in total sales will likely lose market exclusivity and experience generic competition.<sup>14</sup> Given that generic drugs are priced substantially lower than the price their brand name counterparts had before they went off patent,<sup>15</sup> these drugs facing new generic competition will result in a substantial amount of savings in health expenditures.

---

<sup>13</sup> B. Japsen, "Big Savings Coming from Emerging Generic Drugs, Patent Expirations," Chicago Tribune, May 4, 2011.

<sup>14</sup> IMS Health, "IMS Health Forecasts Global Pharmaceutical Market Growth of 5-7 Percent in 2011, Reaching \$880 Billion," October 6, 2010.

<sup>15</sup> Federal Trade Commission, *Pay-for-Delay: How Drug Company Pay-Offs Cost Consumers Billions*, January 2010.

## **APPENDIX A: DETAILED METHODOLOGY AND DESCRIPTION OF RETAIL PRICE DATA**

AARP's Public Policy Institute has been publishing a series of reports that track manufacturers' price changes for the prescription drug products most widely used by older Americans with annual and quarterly results of these price changes reaching as far back as 2000. Since 2008, these reports have focused on price changes for three market baskets—brand, generic, and specialty drugs. Separate analyses of the price changes for these three groups are reported because they are typically made by different drug manufacturers and their prices are subject to different market dynamics, pricing, and related behaviors. In addition, a combined market basket (i.e., brand, generic and specialty) was recently added to the series, which is useful to view the price change trend across all types of prescription drugs.

The AARP Public Policy Institute and the University of Minnesota's PRIME Institute have collaborated to report an index of manufacturers' drug price changes based on the Wholesale Acquisition Cost (WAC) from the Medi-Span Price-Chek PC database.<sup>16</sup> Recently, AARP and the PRIME Institute have created an additional drug price index based on retail prices from the Thomson Reuters MarketScan® Research Databases.<sup>17</sup> Thus, we have used the same market basket of prescription drugs widely used by Medicare Part D enrollees to examine both manufacturer-level prices and retail prices charged to consumers ages 50 and older who are enrolled in employer-sponsored health plans. The addition of retail prices to our analyses will allow the AARP Public Policy Institute to assess what prices are being paid by consumers and/or insurers and whether the rebates and discounts sometimes given to payers are being passed along to the covered individuals. This new retail data was used as the primary data source for AARP's Rx Price Watch reports beginning with the brand drug report<sup>18</sup> and moving forward. As

---

<sup>16</sup> Medi-Span is a private organization that collects price and other clinical and drug-related data directly from drug manufacturers and wholesalers. Price-Chek PC is a product of Medi-Span (Indianapolis, IN), a division of Wolters Kluwer Health, Inc., and uses data from the Master Drug Database (MDDDB®). This commercial drug database has been published for more than 25 years and provides “comprehensive, integratable drug databases to healthcare professionals worldwide. The Medi-Span product line is an accurate and trusted drug information source that integrates with healthcare software applications.” (Open Letter to Pharmaceutical Manufacturers, Distributors and Re-packagers, Re: Pharmaceutical Product Pricing Information for the Medi-Span Drug File [MDDDB®], July 2003, published on the Medi-Span Website: <http://www.medispan.com>.)

<sup>17</sup> The Thomson Reuters MarketScan® Research Databases, a family of databases, contains individual-level healthcare claims, lab test results, and hospital discharge information from large employers, managed care organizations, hospitals, Medicare, and Medicaid programs. The Healthcare & Science business of Thomson Reuters constructs the MarketScan® Research Databases by collecting data from employers, health plans, and state Medicaid agencies and placing them into databases. D.M. Adamson, S. Chang, and L.G. Hansen, “White Paper: Health Research Data for the Real World: The MarketScan Databases,” Thomson Healthcare, January 2008.

<sup>18</sup> The first AARP Rx Price Watch Report to use the retail price data was “Trends in Retail Prices of Brand Name Prescription Drugs Widely Used by Medicare Beneficiaries 2005 to 2009,” Stephen W. Schondelmeyer and Leigh Purvis, AARP Public Policy Institute, Report # 2010-06, August 2010, which can be found at: <http://www.aarp.org/rxpricewatch>.

in the past, the series will include separate data sets and reports for brand name, generic, and specialty drugs, and also for the combined market basket.

This appendix describes the characteristics of the market baskets used in the Rx Price Watch reports, as well as how the new retail data were refined and incorporated into the analysis.

### **Market Basket Characteristics**

The AARP Public Policy Institute has been reporting manufacturer drug product price changes annually and quarterly since 2004. Previous reports by AARP were based on a market basket of retail and mail-order prescriptions provided to about two million people age 50 and older who used the AARP Pharmacy Service. Following the implementation of the Medicare Part D program, we chose to develop a new market basket of drugs based on actual drug use in Medicare Part D plans during calendar year 2006. This new market basket has been used for all AARP price trend reports published since 2007.

The brand name market basket for this price change study is composed of 220 drug products.<sup>19</sup> These 220 drug products accounted for 84.6 percent of all brand name (both brand single source and brand multiple source) prescription expenditures, 82.7 percent of all brand name prescriptions and 84.2 percent of all brand name days of therapy provided.

The generic market basket is composed of 185 widely used generic drug products. These drug products represent 89.0 percent of sales, 91.6 percent of prescriptions, and 91.5 percent of days of therapy provided.

The specialty market basket for this price change study is composed of 144 widely used specialty drug products. These 144 drug products represented 91.4 percent of all specialty drug expenditures, 87.6 percent of all specialty drug prescriptions, and 93.7 percent of all specialty drug days of therapy provided.

---

<sup>19</sup> Although the original sample contained 220 brand name prescription drugs, Zyrtec 10 mg tablets went over-the-counter in January 2008 and was subsequently excluded from the market basket and related analysis. In addition, Risperdal 0.25 mg tablets and Risperdal 4 mg tablets were excluded due to insufficient price data.

There are 549 drug products in the overall (combined) market basket (220 brand name, 185 generic, and 144 specialty drug products).<sup>20</sup> Brand name prescription drugs consumed the majority of the expenditures (70.4 percent), while generic drugs were the majority of prescriptions dispensed (58.3 percent). Specialty drugs, not including any payments that were made under Medicare Parts A and B,<sup>21</sup> represented 7.4 percent of the Medicare Part D plan's expenditures and 1.3 percent of the plan's prescriptions. This combined market basket represented the vast majority of the outpatient prescription drug market for Medicare recipients, accounting for 81.6 percent of all outpatient prescription drug expenditures under Medicare Part D, 79.2 percent of all outpatient prescriptions dispensed, and 91.2 percent of all days of therapy provided in outpatient settings.

A more detailed explanation of the process used for determining the market basket of drug products to be tracked is available in Appendix A of the AARP Public Policy Institute's March 2008 report, "Rx Watchdog Report: Trends in Manufacturer Prices of Brand Name Prescription Drugs Used by Medicare Beneficiaries, 2002 to 2007."<sup>22</sup>

### **Monitoring Retail Drug Prices**

Historically, the Rx Watchdog reports have been based on market baskets of drugs constructed using data from a Medicare Part D plan provider for 2006 and manufacturer drug price changes measured using WAC data from the Medi-Span Price-Chek PC database. The AARP Public Policy Institute and the University of Minnesota's PRIME Institute recently collaborated to develop a retail drug price index to be known as the Rx Price Watch reports based on retail prescription prices from the Thomson Reuters MarketScan® Research Databases. This new retail price index will allow the AARP Public Policy Institute to assess retail prices actually being paid by consumers and/or insurers and whether or not the rebates and discounts sometimes given to pharmacy benefit managers, Part D drug plans, and payers are being passed along to the covered individuals.

#### ***Retail Data Description***

The Thomson Reuters MarketScan® Research Databases are comprised of eight fully integrated claims databases, and are one of the nation's largest collections of patient data. The warehouse features an opportunity sample from multiple sources (employers, states, health plans), over four billion patient records, and 69 million covered lives.<sup>23</sup> The data used in the Rx Price Watch analyses are drawn from the Thomson Reuters MarketScan®

---

<sup>20</sup> In order to measure the impact of changes in retail price alone, the weights for drug products in this market basket are fixed over time. Drug products that enter the market as generics after 2006 will not be included in this index. If drug products are withdrawn from the market, they will be dropped from the market basket in subsequent periods and the weights of other drugs will be proportionately adjusted.

<sup>21</sup> Since the specialty market basket does not include drugs that fall under Medicare Parts A and B, these numbers do not reflect total specialty drug utilization and spending among Medicare beneficiaries.

<sup>22</sup> Available on the AARP website, [http://www.aarp.org/health/medicare-insurance/info-04-2009/rx\\_watchdog.html](http://www.aarp.org/health/medicare-insurance/info-04-2009/rx_watchdog.html).

<sup>23</sup> D.M. Adamson, S. Chang, and L.G. Hansen, "White Paper: Health Research Data for the Real World: The MarketScan Databases," Thomson Healthcare, January 2008.

## Commercial Database and the Thomson Reuters MarketScan® Medicare Supplemental Database.

The Thomson Reuters MarketScan® Commercial Database consists of employer- and health plan-sourced data containing medical and drug data for several million individuals. Nearly 18 million individuals are included in the database, encompassing employees, their spouses, and dependents that are covered by employer-sponsored private health insurance. Healthcare for these individuals is provided under a variety of fee-for-service, fully capitated, and partially capitated health plans, including preferred and exclusive provider organizations, point of service plans, indemnity plans, health maintenance organizations, and consumer-directed health plans.

The Thomson Reuters MarketScan® Medicare Supplemental Database is composed of data from retirees with Medicare supplemental insurance sponsored by employers or unions. In 2007, 23% of the 44 million Medicare beneficiaries received their drug benefits through an employer or union-sponsored health plan.<sup>24</sup> The Thomson Reuters MarketScan® Medicare Supplemental Database includes the Medicare-covered portion of payment, the employer-paid portion, and any patient out-of-pocket expenses. The database provides detailed cost and use data for healthcare services performed in both inpatient and outpatient settings.

The retail price data drawn from the Thomson Reuters MarketScan® Commercial Database and Thomson Reuters MarketScan® Medicare Supplemental Database had to meet several conditions in order to be included in the analysis:

1. Claimant must be age 50 and older
2. Claim must have a value of greater than zero in the following fields:
  - a. Total payment amount
  - b. Metric quantity
  - c. Ingredient cost
  - d. Days supply
  - e. Average wholesale price.
3. Metric quantity value must fall within pre-defined ranges developed using reference data from the Medi-Span Price-Chek PC database.
4. Claim must come from a non-capitated health plan.

Thomson Reuters then combined the two databases and provided the AARP Public Policy Institute with datasets that included the monthly median (as well as the 10<sup>th</sup>, 25<sup>th</sup>, 75<sup>th</sup> and 90<sup>th</sup> percentile) retail price from January 2004 through December 2009 for all of the drug products in the Rx Price Watch market baskets. The monthly median retail prices were compiled in spreadsheets and utilized to track price changes among all of the drug products in the AARP market baskets.

---

<sup>24</sup> D.M. Adamson, S. Chang, and L.G. Hansen, "White Paper: Health Research Data for the Real World: The MarketScan Databases," Thomson Healthcare, January 2008.

## Calculating Annual Price Changes for Each Drug

This Rx Price Watch report calculates average retail price changes for drug products in the following ways:

- The *annual point-to-point* percent change in retail price is calculated as the percent change in price for a given month compared with the same month in the previous year (e.g., January 2009 vs. January 2008, February 2009 vs. February 2008).
- The 12-month *rolling average* percent change in retail price is calculated by taking the average of the point-to-point changes over the preceding 12 months. Thus, for example, the average annual retail price changes for 2009 refer to the average of the annual point-to-point price changes for each of the 12 months from January 2009 through December 2009 compared with the same months in the previous year.

To aggregate retail price changes across multiple drugs, a weighted average of price changes was calculated by weighting each drug's annual price change (calculated using retail price data from the Thomson Reuters MarketScan® Commercial Database and the Thomson Reuters MarketScan® Medicare Supplemental Database) by its share of the Medicare Part D plan provider's total 2006 prescription sales among its given market basket (e.g., brand name, generic, specialty, or combined).

The weights used for all years in this study were based on 2006 sales from the largest Medicare Part D plan provider, which included the AARP Plans. The 2006 weights were used and held constant over time in the market basket so that change in the price indices would be a function of price changes alone and not a function of changes in mix within the market basket(s).

However, some drugs that were in the sample in 2006 were not on the market in all earlier years. As a result, drug products were dropped out of the analysis in the month before they entered the market and for all previous months, and the weights of the products present in the market during each month prior to 2006 were recalculated to reflect their relative share of the total sales as adjusted to reflect only drugs in the market during that period.

A more detailed description of the methods used for calculating various measures of the change in prices and study limitations is provided in Appendix A of the AARP Public Policy Institute's March 2008 report, "Rx Watchdog Report: Trends in Manufacturer Prices of Brand Name Prescription Drugs Used by Medicare Beneficiaries, 2002 to 2007."<sup>25</sup>

---

<sup>25</sup> Available on the AARP website, [http://www.aarp.org/health/medicare-insurance/info-04-2009/rx\\_watchdog.html](http://www.aarp.org/health/medicare-insurance/info-04-2009/rx_watchdog.html).

## APPENDIX B: THERAPEUTIC CATEGORY ACRONYMS

<b>Therapeutic Category</b>	<b>Definition</b>
Antidepressants ( <b>SSRIs</b> )	<b>SSRI</b> – Selective-Serotonin Reuptake Inhibitor
Antihypertensives ( <b>ACEs</b> )	<b>ACE</b> – Angiotensin-Converting Enzyme
Cholesterol Agents ( <b>HMG Co-A</b> )	<b>HMG Co-A</b> – HMG Co-A Reductase Inhibitor
Anti-Inflammatory Agents ( <b>NSAIDs</b> )	<b>NSAID</b> - Non-Steroidal Anti-Inflammatory Drug



Public Policy Institute

601 E Street, NW | Washington, DC 20049  
202-434-3840 PH | 202-434-6480 F | [www.aarp.org/ppi](http://www.aarp.org/ppi)

