AARP Public Policy Institute

Rx Price Watch Report

August 2010

Trends in Retail Prices of Brand Name Prescription Drugs Widely Used by Medicare Beneficiaries 2005 to 2009

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By

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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.

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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 (i.e., 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 brand name 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 are being paid by consumers and whether the rebates and discounts often given to payers are being passed along to their clients.

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EXECUTIVE SUMMARY

AARP's Public Policy Institute finds that average retail price increases for brand name prescription drugs widely used by Medicare beneficiaries far outstripped the price increases for other consumer goods and services between 2005 and 2009; this is consistent with the pattern that we have seen since initiating our ongoing series of studies on manufacturers' prescription drug prices in 2004. In 2009, the average annual increase in retail prices for 217 brand name prescription drugs widely used by Medicare beneficiaries was 8.3 percent, and was notably higher than the rate of increase observed during any of the prior four years (i.e., 2005 to 2008), which ranged from 6.0 percent to 7.9 percent. In contrast, the rate of general inflation was -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 (i.e., 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 brand name 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 are being paid by consumers 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 brand name 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 retail price changes as well as differences in average percentage price changes for individual manufacturers and therapeutic categories. The second set of findings summarizes the *cumulative* impact of retail drug price changes that have taken place during the five-year period from 2005 through 2009.

Findings

- In 2009, the average annual increase in retail prices for the 217 most widely used brand name prescription drugs (8.3 percent) was notably higher than the rates of increase for retail prices in the prior five years, which ranged between 6.0 percent and 7.9 percent during the years 2005 to 2008.
- On average, retail prices for 207 brand name drugs that have been on the market since the beginning of the study (December 2004) increased 41.5 percent by December 2009, compared to the general inflation rate of 13.3 percent during the same period.

- The average annual cost for one brand name medication was about $1,400 in 2009. For a consumer who takes three brand name prescriptions on a chronic basis, the average annual cost of therapy for the drug products used to treat chronic conditions rose by almost $1,900 between 2004 and 2009.
- All but 6 of the 217 brand name prescription drug products in the study's market basket had retail price increases during 2009. All of these increases exceeded the rate of general inflation during the same time period.
- All 26 drug manufacturers with at least two drug products in the study's market basket of widely used brand name drugs had average increases in retail price that exceeded the rate of general inflation (-0.3 percent) in 2009. Eight manufacturers had average annual retail price increases of 10 percent or more during 2009.
- All 35 therapeutic categories of brand name drug products had average annual retail price increases that exceeded the rate of general inflation in 2009, ranging from 3.3 percent to 19.0 percent.

Concluding Observations

The findings of this report show that average annual increases in retail prices charged for widely used brand name prescription drugs have continued to consistently exceed the rate of general inflation.

Drug price increases raise Medicare beneficiaries' costs. Retail price increases translate into higher out-of-pocket costs for those beneficiaries who pay a percentage of drug costs (coinsurance) rather than a fixed dollar amount (copayment). Higher prices also push more Part D enrollees into the "doughnut hole"—the gap in coverage when enrollees have to pay all of their drug costs—each year. And, once in the doughnut hole, enrollees feel the full effect of the higher retail prices.

The recently-passed health care reform legislation has provisions that will phase out the Medicare Part D coverage gap through discounts on brand name, biologic, and generic prescription drugs. However, Part D enrollees will continue to be exposed to the effects of the doughnut hole until the legislation's provisions are fully implemented in 2020. Furthermore, the value of closing the doughnut hole, while substantial, could be eroded over the years if escalating drug prices are not addressed.

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 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 for this study by weighting each drug product's value by its share among the Medicare Part D plan provider's 2006 annual sales. 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 BRAND NAME PRESCRIPTION DRUGS USED BY MEDICARE BENEFICIARIES 2005 TO 2009

AARP's Public Policy Institute finds that average retail price increases for brand name prescription drugs widely used by Medicare beneficiaries far outstripped the price increases for other consumer goods and services 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.[1] In 2009, the average annual increase in retail prices for 217 brand name prescription drugs widely used by Medicare beneficiaries was 8.3 percent, and was notably higher than the rate of increase observed during any of the prior four years (i.e., 2005 to 2008), which ranged from 6.0 percent to 7.9 percent. In contrast, the rate of general inflation was -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 (i.e., 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 brand name 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.[2] This change 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 third party drug plans 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 brand name 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.

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[1] Previous reports from this series can be found on the AARP Web site at http://www.aarp.org/health/medicare-insurance/info-04-2009/rx_watchdog.html.

[2] 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 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.

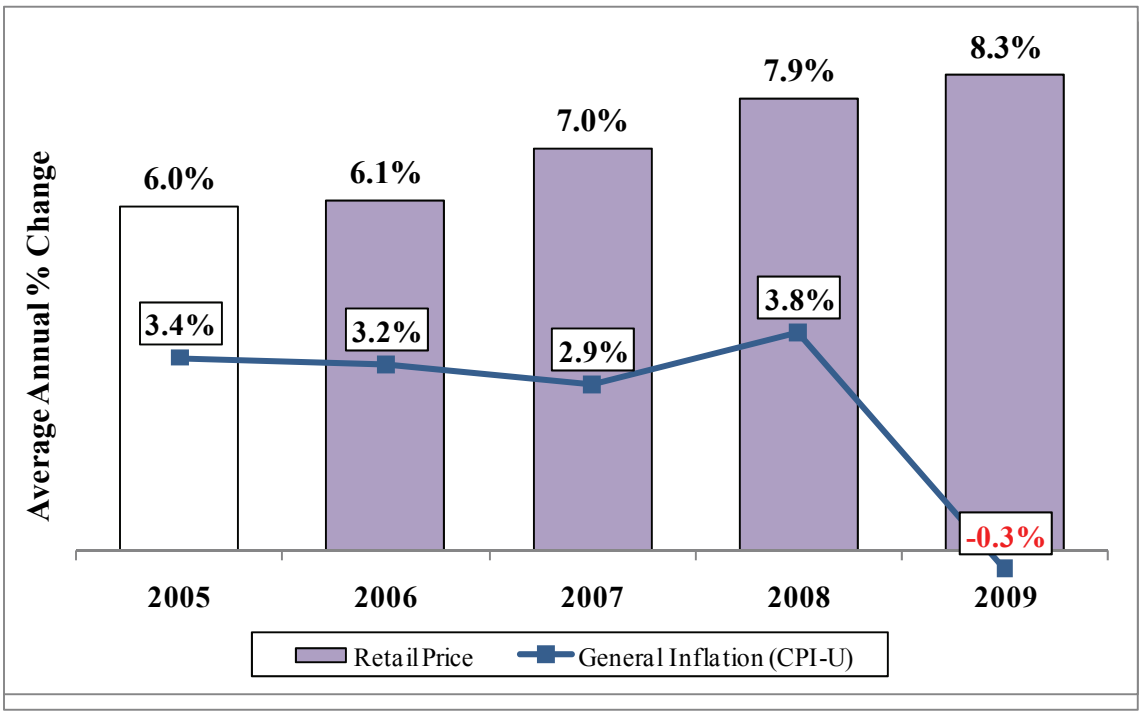
FINDINGS

I. Annual Trends in Retail Price Changes for Most Widely Used Brand Name Prescription Drugs

Annual percent change in retail prices

- Retail prices for the brand name drug products most widely used by Medicare beneficiaries rose 8.3 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 Brand Name Prescription Drugs Continued to Grow in 2009



Note: Calculations exclude Zyrtec 10 mg tablets, which began to be sold over-the-counter (that is, without a prescription) in January 2008. Calculations also exclude Risperdal 0.25 mg tablets and Risperdal 4 mg tablets due to insufficient price data. Shaded bars indicate years when Medicare Part D was operational.
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 increases in 2007 and 2008 (7.0 and 7.9 percent, respectively) were substantially higher than the rates of increase for retail prices in the prior two years. The average retail price increase for this market basket was 6.0 percent and 6.1 percent in 2005 and 2006, respectively.

- The average annual retail price increase in 2009 for these brand name prescription drug products was substantially higher than the rate of general inflation[3] (8.3 percent vs. -0.3 percent); in 2008, the rate of brand name price increase was more than twice the rate of general inflation (7.9 percent vs. 3.8 percent).

Notably, the average annual retail price changes for brand name drug products has continued to increase despite a sizable number of widely used brand name drugs going off patent in the past few years. Since 2006, 70 of the 217 drug products in the brand name market basket have had generic versions introduced to the market.[4] These drugs represent 31.4 percent of 2006 brand name drug sales to Medicare Part D beneficiaries. We have chosen to keep these off-patent drugs in our market basket, since they are still being sold, albeit at considerably lower volumes.[5] Furthermore, if these drug products were excluded from the analysis, the average annual retail price increase for the remaining drug products (i.e., brand name drug products that do not have generic competition) is 8.7 percent in 2009. This indicates that the off-patent products in our market basket actually lower the average annual price change, making our results an underestimate of retail price changes for brand name drug products.

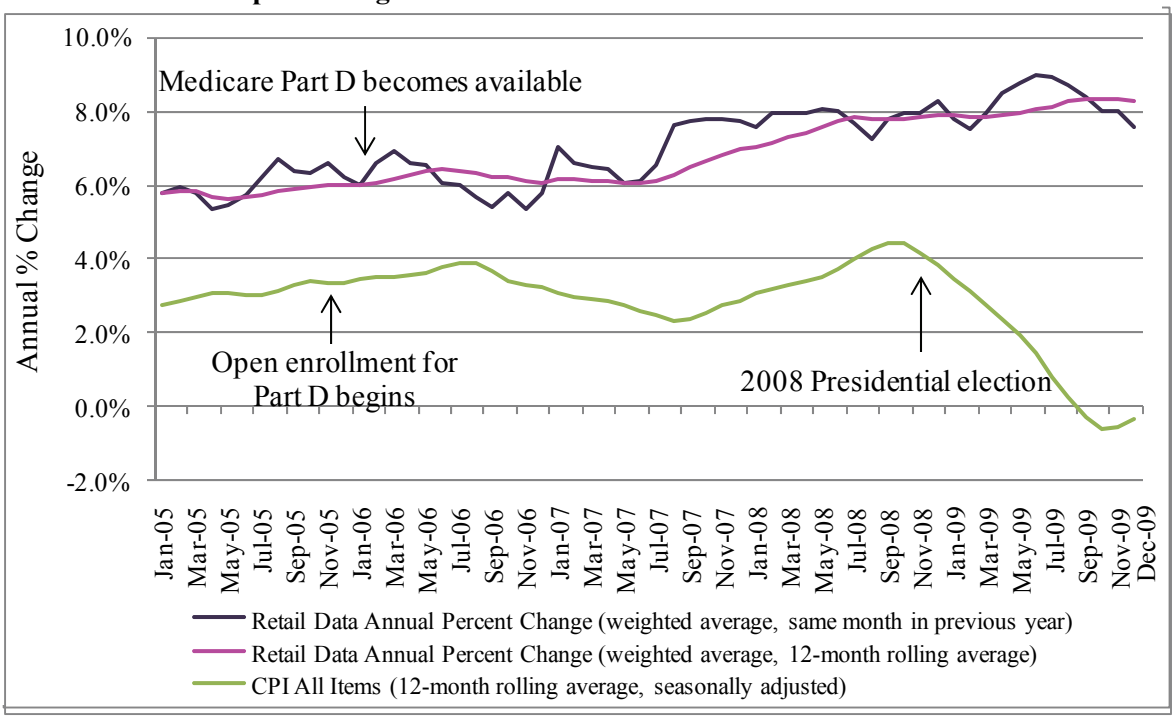
The average annual retail price change reported in Figure 1 is a conservative measure that, by averaging annual point-to-point price changes for each month in a 12-month period (referred to as a *rolling average* change), smoothes over the entire year the annual amount of change in retail price that 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).

[3] The general inflation rate reported is based on the average annual rate of change in the Consumer Price Index-All Urban Consumers for All Items (seasonally adjusted) (CPI-U), Bureau of Labor Statistics series CUSR0000SA0.

[4] One drug product, Zyrtec 10 mg tablets, began to be sold over-the-counter, or without a prescription. As over-the-counter drugs are not typically reported in third party databases, Zyrtec was dropped from the analysis. Two other drug products, Risperdal 0.25 mg tablets and Risperdal 4 mg tablets, were excluded from the analysis due to insufficient price data. Both products had generic equivalents introduced in June 2008 and no longer have a large market share.

[5] Brand name drugs tend to lose market share quickly once generic versions are on the market. For example, when generic versions of Zoloft became available in August 2006, the brand name product lost 85 percent of its overall market share in the first 30 days. Similarly, generic statin dispensing rates almost doubled in the three months after the products entered the market. Medco, 2007 Drug Trend Report, 2008; and Caremark, "Blockbuster Launches of 2006," *TrendsRx Quarterly,* December 2006.

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



Note: Calculations exclude Zyrtec 10 mg tablets, which began to be sold over-the-counter (that is, without a prescription) in January 2008. Calculations also exclude Risperdal 0.25 mg tablets and Risperdal 4 mg tablets due to insufficient price data.
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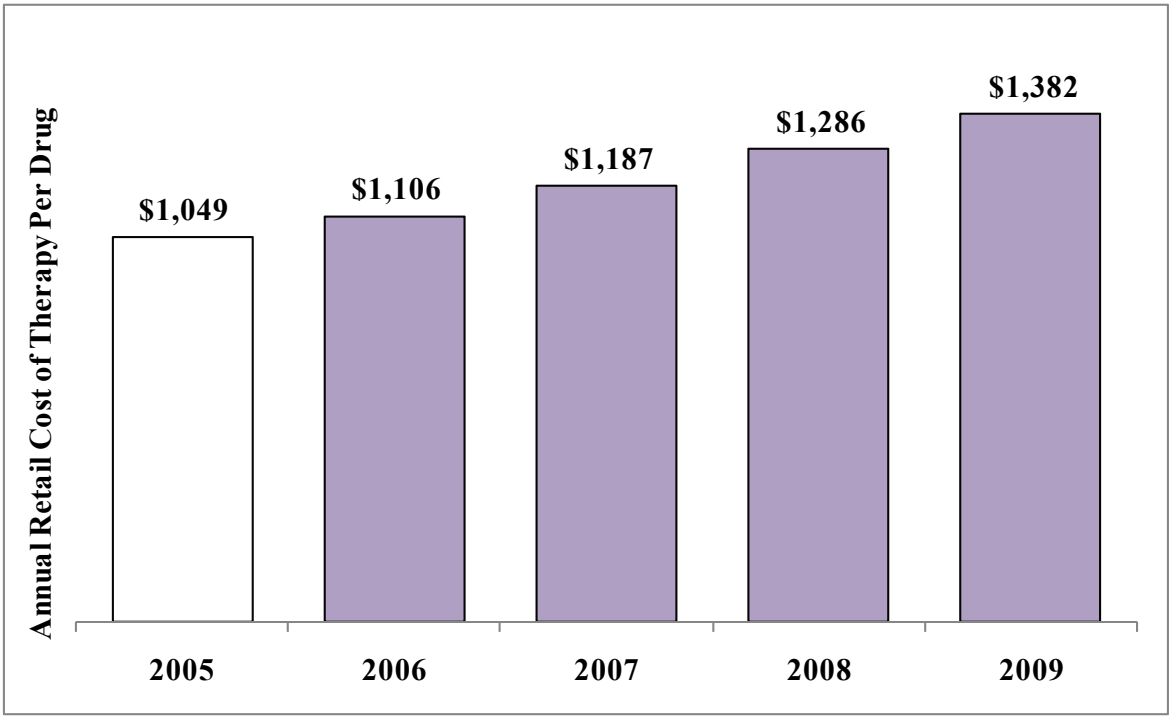
Figure 2 shows that the point-to-point annual change in retail prices has accelerated rapidly at three specific times since Medicare Part D became available in January 2006: (1) November 2006 through January 2007, (2) May 2007 through August 2007, and (3) January 2009 through June 2009. Clearly, the rolling average indicates that brand name drug prices have been increasing steadily since July 2007. Three broad trends have been observed troughout the entire time the Medicare Part D prescription drug program has been in operation: (1) the retail price level of brand name drug products has steadily increased rather than decreased; (2) the rate of increase in retail prices of brand name drug products has continued to accelerate; and (3) the retail price increases have been well above (usually two-fold or more) the rate of general inflation.

Annual retail cost of therapy

Retail prices for the 209 most widely used brand name drugs used for treating chronic conditions (out of a total market basket of 217 drugs)[6] were translated into average annual costs of therapy (Figure 3).[7]

Figure 3: The Average Annual Retail Cost of Therapy for Most Widely Used Brand Name Prescription Drugs Was Almost $1,400 per Year in 2009



Note: Calculations exclude Zyrtec 10 mg tablets, which began to be sold over-the-counter (that is, without a prescription) in January 2008. Calculations also exclude Risperdal 0.25 mg tablets and Risperdal 4 mg tablets due to insufficient price data. Shaded bars indicate years when Medicare Part D was operational. This data does not include eight drug products typically used for acute conditions or for less than one year.
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- The average annual retail cost of therapy was almost $1,400 per year per prescription drug in 2009, roughly 32 percent higher than the average annual retail cost in the year before Medicare Part D was implemented (i.e., 2005).

An older American who takes three prescription drugs is likely to have experienced an average annual retail cost of therapy of $4,146 in 2009, assuming that the consumer uses brand name drugs for these chronic conditions. The annual cost of therapy was substantially higher (31.7 percent) than the average annual retail cost in the year prior to the implementation of Medicare Part D, or about $3,147 per year in 2005. While insurance may cover much of this cost for some beneficiaries, it would not cover the

[6] Drug products typically used to treat acute conditions or for less than one year's duration include: Lidoderm 5%, Levaquin 250 mg, 500 mg, and 750 mg, Patanol 0.1%, Avelox 400 mg, Lamisil 250 mg, and Valtrex 1 Gm.
[7] 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.

costs for Medicare Part D enrollees in the "doughnut hole"[8] (the period when beneficiaries pay 100 percent of their prescription costs).[9]

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

AARP has tracked brand name drug retail price changes for the five-year period from December 31, 2004, to December 31, 2009. More than 95 percent (207 of 217) of the widely used drugs in the brand name 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

- Cumulatively, the average retail price increase for the 207 widely used brand name drug products that have been on the market from the end of 2004 through the end of 2009 was 41.5 percent, compared with 13.3 percent for general inflation—or more than 3 times the rate of general inflation.[10]
- Figure 4 illustrates the cumulative effect of retail price changes between the end of 2004 and the end of 2009 for six specific drug products. Five of these drug products were chosen because they are among the 25 most widely used drugs in the market basket and are from a variety of therapeutic classes:
    - Nexium 40 mg capsules (AstraZeneca)—used in the treatment of acid reflux disease;
    - Lipitor 20 mg tablets (Pfizer)—used to treat high cholesterol;
    - Aricept 10 mg tablets (Eisai)—an anti-Alzheimer's drug;
    - Fosamax 70 mg tablets (Merck)—used to treat osteoporosis; and
    - Advair Diskus 250 mg-50 mg (GlaxoSmithKline)—a respiratory inhaler.

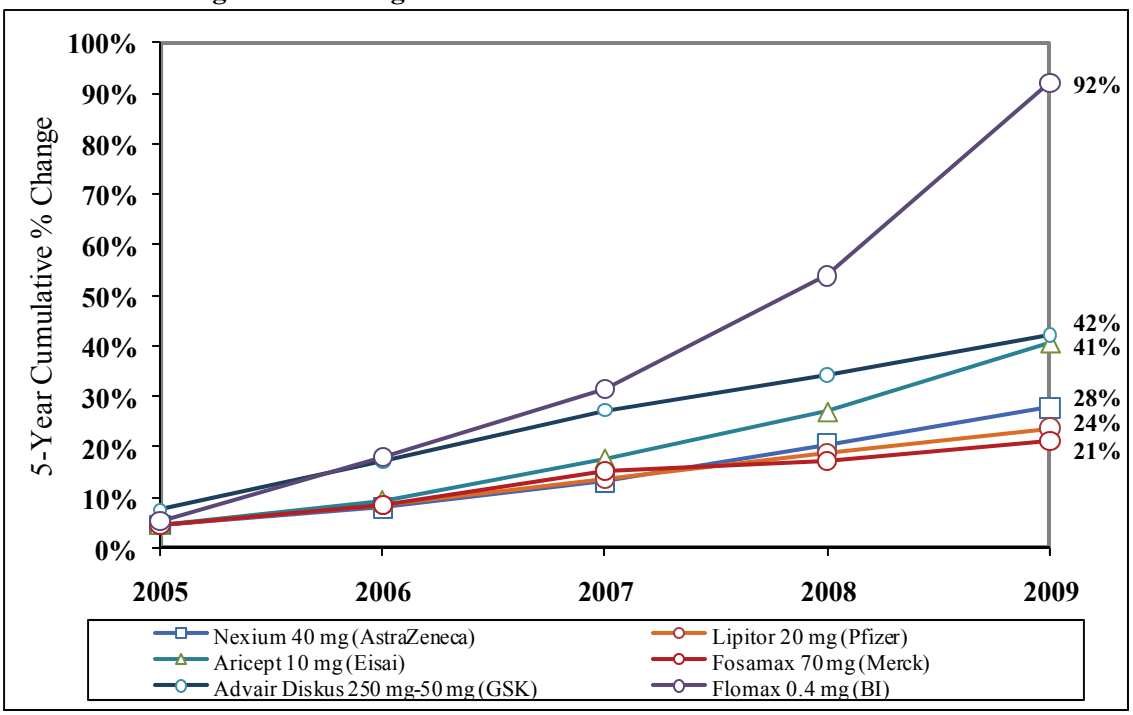
[8] The cost impact on beneficiaries is based on the continued use of the brand name drug product. Sixty-seven percent of the brand name drug products in this index (146 of 217) do not have therapeutically equivalent generic alternatives. For the remaining 33 percent (71 drug products) of these brand name drug products, the beneficiary could save money by switching to a less-expensive generic drug product.

[9] This "gap" in coverage generally begins after the beneficiary has $2,830 (in 2010) in total drug costs and continues until the beneficiary spends $4,550 in out of-pocket drug costs. Centers for Medicare & Medicaid Services, "CMS Announces 2010 Payment Information for Part C Medicare Advantage Plans and Part D Prescription Drug Plans," Press Release, April 6, 2009. Some plans might offer some coverage in the gap, and some low-income beneficiaries also have gap coverage. As part of the recently-passed Affordable Care Act, in 2011, non-low-income Part D enrollees will receive a 50 percent discount on their brand name and biologic prescription drugs while they are in the coverage gap, as well as a 7 percent discount on their generic prescription drugs. These discounts will continue growing until, in 2020, Part D enrollees are responsible for 25 percent of all of prescription drug costs while they are in the coverage gap.

[10] The average cumulative growth rate in retail prices for all brand name drugs in the market basket was 37.8 percent. This number was calculated by compounding the average annual growth rate for each year from 2005 to 2009.

- The sixth drug, Flomax 0.4 mg capsules (Boehringer Ingelheim), which is used to treat symptoms of an enlarged prostate, was chosen because it had the largest percent price increase in 2009 among the drug products that have been on the market since the end of 2004.

Figure 4: The Five-Year Cumulative Percent Change in Retail Price is 92 Percent for the Brand Name Drug with the Largest Percent Price Increase 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.

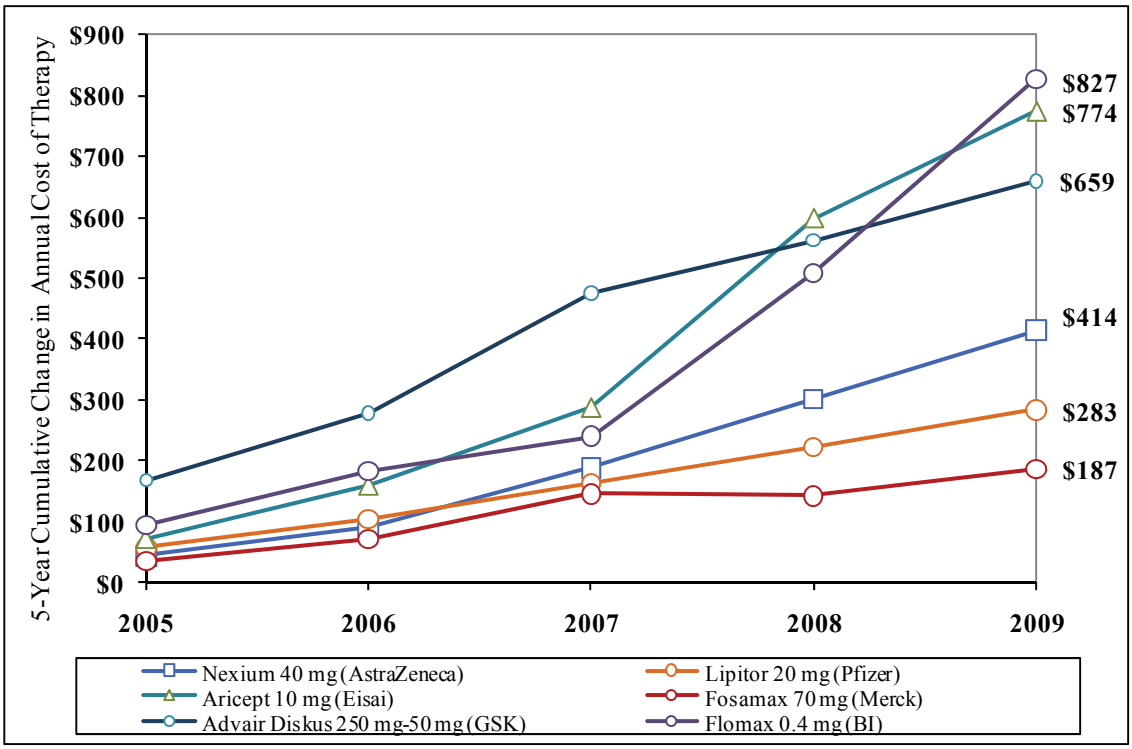
- The five-year (i.e., December 31, 2004 to December 31, 2009) cumulative percent change in retail prices for six specific drug products is shown in Figure 4.
  - The retail price of Flomax 0.4 mg rose by 92 percent over the entire five-year period, when measured as a 12-month rolling average change. It is notable that this product's retail price increases accelerated most rapidly in the two years before its patent expired in early 2010.
  - The retail prices of Advair Diskus 250 mg-50 mg and Aricept 10 mg tablets each increased cumulatively by approximately 40 percent over the five-year period. The patent for Advair Diskus 250 mg-50 mg is expected to expire in 2011, and the patent for Aricept 10 mg is expected to expire in late 2010.
  - The retail price of Nexium 40 mg capsules increased cumulatively by 28 percent, and the retail price of Lipitor 20 mg tablets increased by 24 percent between the end of 2004 and the end of 2009.

- The retail price of Fosamax 70 mg tablets increased by approximately 20 percent between the end of 2004 and the end of 2009, even with the introduction of a generic equivalent in February 2008.

Five-year cumulative change in annual retail cost of therapy

- All but 8 of the 207 brand name drug products that have been on the market since the end of 2004 are used to treat chronic conditions. By the end of 2009, the average annual retail cost of therapy for these brand name drug products was $626 higher than five years earlier, assuming that the consumer used these brand name drugs for chronic conditions. For a consumer who takes three brand name medications, this translates into an average annual increase in retail costs of $1,878 for the three brand name therapies.
- The five-year (2005 to 2009) cumulative change in brand name cost of therapy due to retail prices for six specific drug products is shown in Figure 5.

Figure 5: Five-Year Cumulative Change in Annual Retail Cost of Therapy Accelerates for Brand Name Drugs Going Off Patent in 2010



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- The retail price for a one-year supply of Flomax 0.4 mg, which was $1,493 in 2009, rose by $827 between the end of 2004 and the end of 2009. It is notable that the majority of this increase took place in the two years before its patent expired in April 2010.

- Similarly, the retail price for a one-year supply of Aricept 10 mg rose by almost $775 over the five-year period ending in 2009, increasing from $1,632 per year to $2,406 per year. Over one-half of this increase took place in 2008 and 2009, the two years before its patent is expected to expire in November 2010.

- The retail price for a one-year supply of Advair Diskus 250 mg-50 mg rose by almost $660 between the end of 2004 and the end of 2009. At the end of 2004, the retail price for a one-year supply of Advair Diskus 250 mg-50 mg was $1,768; by the end of 2009 the retail price had increased to $2,427. The patent for Advair Diskus 250 mg-50 mg is expected to expire in 2011.

- The retail price for a one-year supply of Lipitor 20 mg tablets rose by more than $280 by the end of the five-year period (2005 to 2009). In 2009, the retail price of a one-year supply of Lipitor 20 mg tablets was $1,470.

- The retail price for a one-year supply of Nexium 40 mg capsules was $1,971 by the end of 2009, an increase of $414 from the end of 2004.

- The retail price for a one-year supply of Fosamax 70 mg tablets rose by $187 between the end of 2004 and the end of 2009. In 2009, the retail price of a one-year supply of Fosamax 70 mg tablet was $1,065. Fosamax 70 mg tablets faced the introduction of a generic equivalent in February 2008.

III. Retail Price Changes for Most Widely Used Brand Name Prescription Drugs in 2009

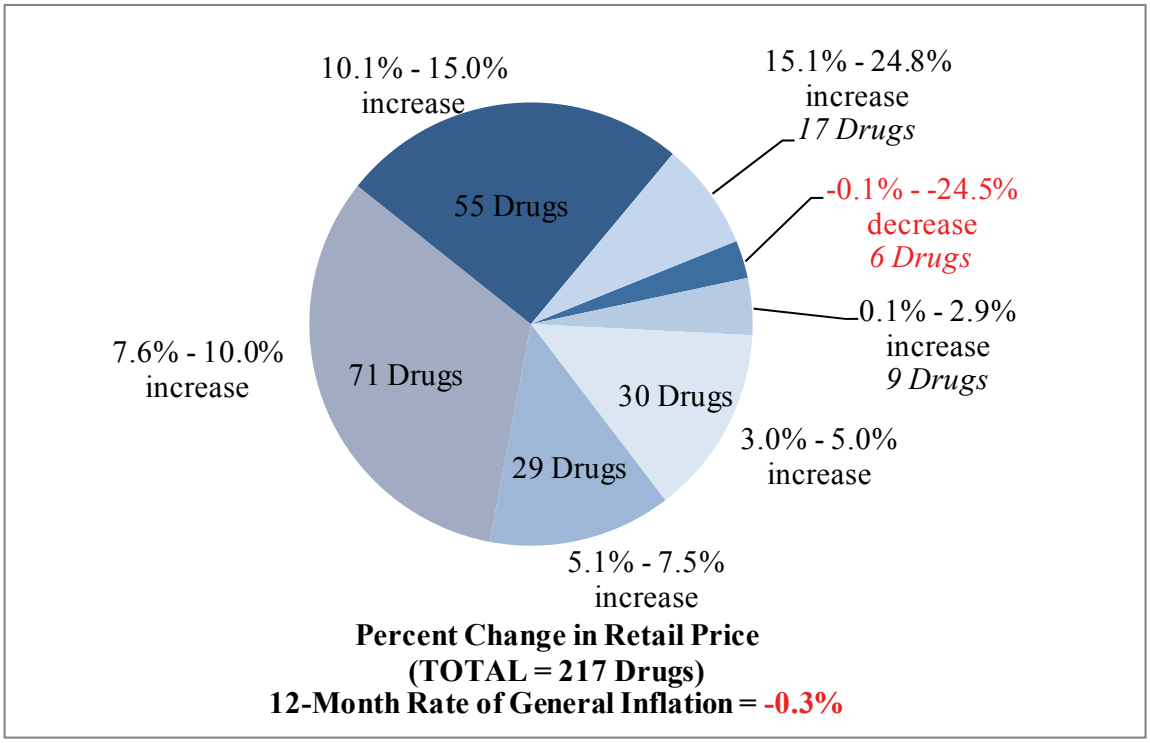
Distribution of retail price changes

All but 6 of the 217 (97.2 percent) most widely used brand name prescription drug products in this study's market basket had retail price increases during 2009, when measured as a 12-month rolling average (Figure 6).

- Annual retail price increases for 213 (98.2 percent) of the 217 drug products met or exceeded the rate of general inflation (-0.3 percent) in 2009.

- Annual retail price increases for 172 (79.3 percent) of the 217 brand name drug products in the market basket increased more than 5.0 percent in 2009, including 71 (32.7 percent) with a price increase between 7.6 percent and 10.0 percent, 55 (25.3 percent) with a price increase between 10.1 percent and 15.0 percent, and 17 (7.8 percent) with a price increase of more than 15.1 percent.

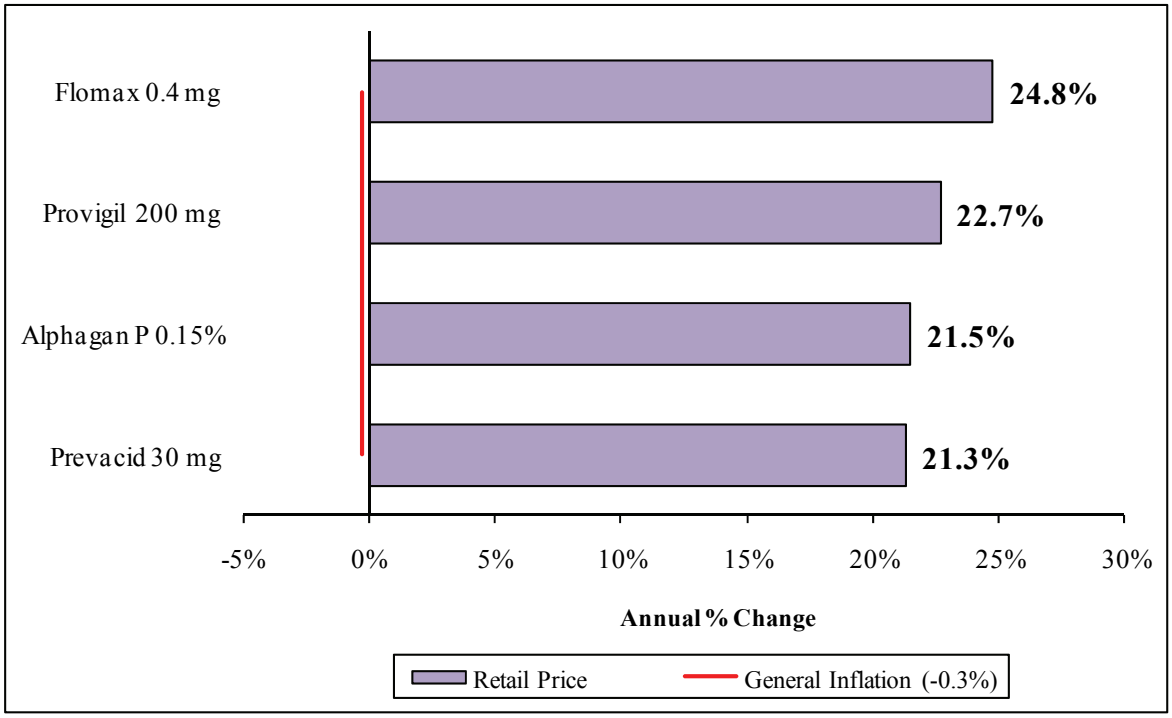
Figure 6: One-Third of the Most Widely Used Brand Name Prescription Drugs Had Retail Price Increases of Greater Than 10 Percent in 2009



Note: Calculations exclude Zyrtec 10 mg tablets, which began to be sold over-the-counter (that is, without a prescription) in January 2008. Calculations also exclude Risperdal 0.25 mg tablets and Risperdal 4 mg tablets due to insufficient price data.
Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Thomson Reuters MarketScan® Research Databases.

Four of the brand name drug products had retail price increases that were greater than 20 percent in 2009 (Figure 7).

Figure 7: Four Widely Used Brand Name Drugs Had Retail Price Increases of Over 20 Percent in 2009



The general inflation rate is based on CPI-U (See Consumer Price Index-All Urban Consumers for All Items (seasonally adjusted) (CPI-U), Bureau of Labor Statistics series CUSR0000SA0).
Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Thomson Reuters MarketScan® Research Databases.

All of the 25 top-selling brand name drug products with the greatest sales in 2006 had retail price increases during 2009. Most (16 of 25) of the drug products had annual retail price increases of over 5 percent; four of the Top 25 drug products had annual retail price increases of over 10 percent (Table 1).

Table 1: All of the Top 25 Brand Name Prescription Drug Products Had Retail Price Increases 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	Nexium 40 mg capsule	30	AstraZeneca	Ulcer Drugs (PPIs)	$5.40	6.0%
2	Plavix 75 mg tablet	90	Bristol-Myers Squibb	Anticoagulants	$5.06	8.8%
3	Prevacid 30 mg DR capsule	100	Takeda	Ulcer Drugs (PPIs)	$5.50	7.0%
4	Protonix 40 mg tablet	90	Wyeth	Ulcer Drugs (PPIs)	$4.21	6.8%
5	Lipitor 20 mg tablet	90	Pfizer	Cholesterol Agents (HMG CoA)	$4.03	4.1%
6	Lipitor 10 mg tablet	90	Pfizer	Cholesterol Agents (HMG CoA)	$2.84	4.2%
7	Aricept 10 mg tablet	30	Eisai	Antidementia Agents	$6.59	10.8%
8	Fosamax 70 mg tablet	4	Merck	Osteoporosis Agents	$2.92	3.4%
9	Norvasc 10 mg tablet	90	Pfizer	Antihypertensives (CCBs)	$2.66	4.4%
10	Advair Diskus 250-50 mist	60	Glaxo Smith Kline	Respiratory Agents	$6.65	5.8%
11	Lipitor 40 mg tablet	90	Pfizer	Cholesterol Agents (HMG CoA)	$4.03	4.1%
12	Actonel 35 mg tablet	4	Warner Chilcott Pharm	Osteoporosis Agents	$3.44	8.1%
13	Norvasc 5 mg tablet	90	Pfizer	Antihypertensives (CCBs)	$1.95	4.3%
14	Celebrex 200 mg capsule	100	Pfizer	Anti-Inflammatory Agents	$3.72	4.4%
15	Namenda 10 mg tablet	60	Forest	Antidementia Agents	$5.80	8.5%
16	Singulair 10 mg tablet	30	Merck	Respiratory Agents	$3.85	8.1%
17	Flomax 0.4 mg capsule	100	Boehringer Ingelheim	Prostatic Hypertrophy Agents	$4.09	24.8%
18	Zetia 10 mg tablet	30	Merck/Schering-Plough	Cholesterol Agents (HMG CoA)	$3.42	9.3%
19	Lexapro 10 mg tablet	100	Forest	Antidepressants (SSRIs)	$2.86	5.7%
20	Lantus 100/ml inj	10	Sanofi-Aventis	Antidiabetics (Insulins)	$8.95	8.5%
21	Zocor 20 mg tablet	30	Merck	Cholesterol Agents (HMG CoA)	$4.84	2.3%
22	Ambien 10 mg tablet	100	Sanofi-Aventis	Sedatives	$5.11	13.1%
23	Seroquel 200 mg tablet	100	AstraZeneca	Antipsychotics	$8.29	13.0%
24	Zocor 40 mg tablet	30	Merck	Cholesterol Agents (HMG CoA)	$4.84	2.3%
25	Avandia 4 mg tablet	30	Glaxo Smith Kline	Antidiabetics (Oral)	$3.86	8.6%
General rate of inflation (as measured by growth in CPI-U)						**-0.3%**

*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.

- Boehringer Ingelheim's Flomax 0.4 mg capsules had the highest annual percent change (24.8 percent) in retail price during 2009 among the top 25 brand name drug products with the greatest sales in 2006.

- Four of the top 25 drug products had annual changes in retail price of more than 10 percent. In addition to Boehringer Ingelheim's Flomax 0.4 mg capsules, the other drug products were Eisai's Aricept 10 mg tablets, Sanofi-Aventis' Ambien 10 mg tablets, and AztraZeneca's Seroquel 200 mg tablets.

- Merck's Zocor (20 mg and 40 mg) had a retail price change of 2.3 percent in 2009. Merck's Fosamax 70 mg tablets had an increase of 3.4 percent. All three of

these brand name drugs have recently faced their first generic competition—Zocor in June 2006 and Fosamax in February 2008.[11]

- Four other drug products among the 25 top selling brand name drug products with the greatest sales recently faced their first generic competition: Wyeth's Protonix 40 mg tablets EC in January 2008, Pfizer's Norvasc (5 and 10 mg tablets) in March 2007, and Takeda's Prevacid 30 mg DR capsules in November 2009. These drug products experienced retail price increases in 2009 that ranged from 4.3 percent to 8.8 percent.

IV. Retail Price Changes for Most Widely Used Brand Name Prescription Drugs by Manufacturer and by Therapeutic Category

Twenty-six drug manufacturers had at least two drug products in the study's market basket of widely used brand name drugs. The weighted average annual increase in retail price for the drug products from all of the 26 drug manufacturers exceeded the rate of general inflation in 2009 (Figure 8).

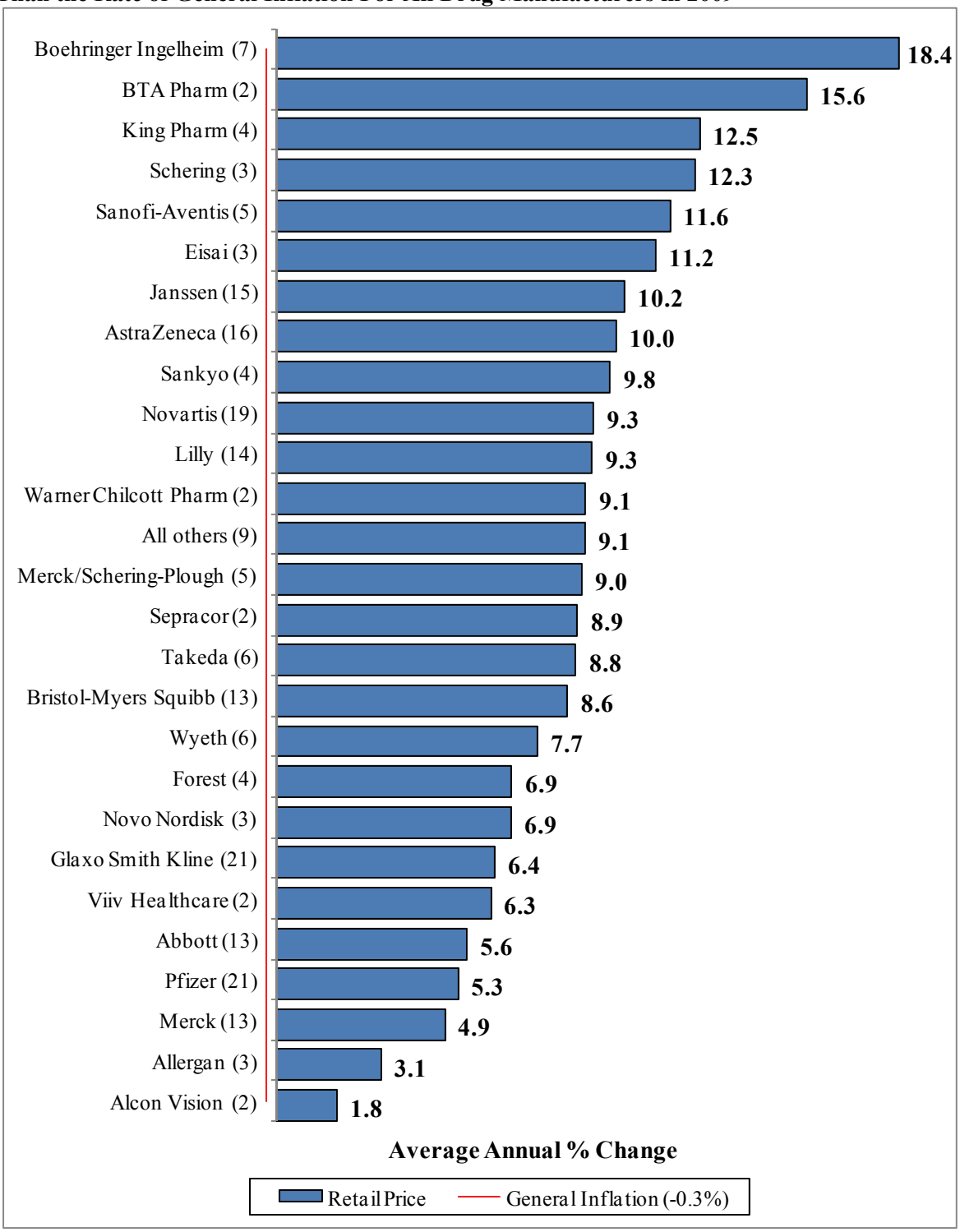
- Eight manufacturers had average annual retail price increases of 10 percent or more during 2009. One manufacturer's drug products (Boehringer Ingelheim) had an average annual retail price increase of 18.4 percent.

- Nearly all of the drug manufacturers (23 of 26)—plus the "All Others" category—had weighted average annual retail price increases of more than 5 percent.

- The lowest average retail price increase was for the drug products from Alcon Vision. The average 2009 retail price increase for this manufacturer was 1.8 percent.

[11] U.S. Food and Drug Administration, Center for Drug Evaluation and Research, *First Time Generic Drug Approvals,* at www.fda.gov/cder/ogd/approvals/default.htm.

Figure 8: Retail Prices for Widely Used Brand Name Drug Products Increased by More Than the Rate of General Inflation For All Drug Manufacturers in 2009

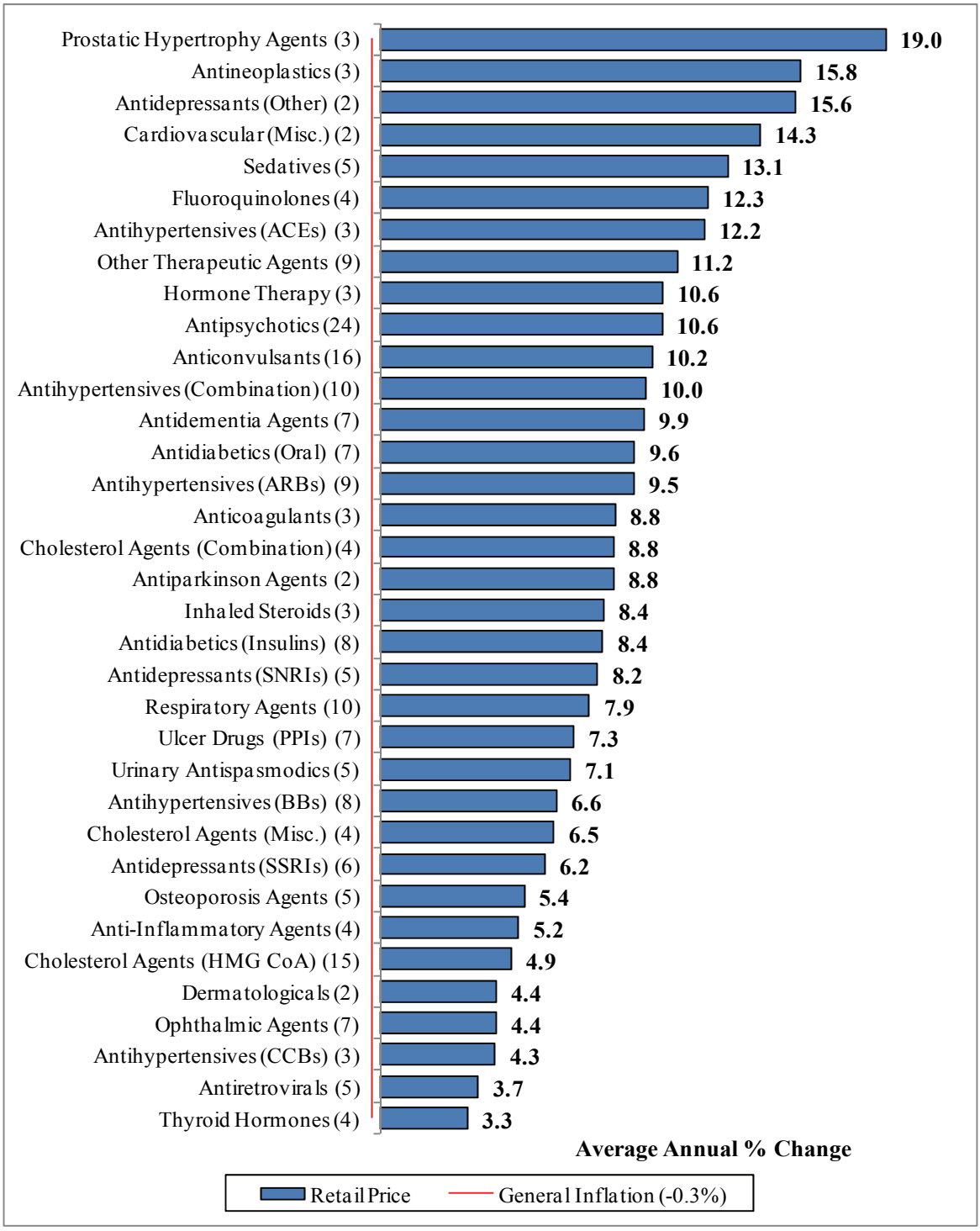


Note: Average increase for "Pfizer" excludes Zyrtec 10 mg tablets, which began to be sold over-the-counter (that is, without a prescription) in January 2008. Average increase for "Janssen" excludes Risperdal 0.25 mg tablets and Risperdal 4 mg tablets due to insufficient price data. Manufacturers with fewer than two drug products in the 2006 market basket of most widely used brand name 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.

All 35 therapeutic categories of brand name drug products had average annual retail price increases that exceeded the rate of general inflation (-0.3 percent) in 2009 (Figure 9).

- The therapeutic category with the highest retail price increase—prostatic hypertrophy agents—had an average annual retail price increase of 19.0 percent in 2009.
- Three therapeutic categories, including the prostatic hypertrophy agents category, had average annual price increases of more 15 percent in 2009. Another nine therapeutic categories had average annual retail price increases of between 10 percent and 15 percent.
- Twenty-nine of the 35 therapeutic categories had average annual retail price increases of more than 5 percent in 2009.

Figure 9: All Therapeutic Categories Had Retail Price Increases That Exceeded the Rate of General Inflation in 2009



Note: Average increase for "Antihistamines (Non-Sedating)" is no longer provided due to the removal of Zyrtec 10 mg tablets, which began to be sold over-the-counter (that is, without a prescription) in January 2008. The other drug in the therapeutic category, Clarinex 5 mg tablets, was moved to the "Other Therapeutic Agents" category. Average increase for "Antipsychotics" excludes Risperdal 0.25 mg tablets and Risperdal 4 mg tablets due to insufficient retail price data. 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 brand name 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 prices have increased substantially for brand name prescription drug products that are used by Medicare Part D prescription drug program beneficiaries. Average annual increases in retail prices for the 217 most widely used brand name prescription drugs continued to substantially exceed the rate of general inflation. The average annual increase in 2009 (8.3 percent) was substantially higher than the rates of increase for retail prices in the prior five years, which ranged between 6.0 percent and 7.9 percent during the years 2004 to 2008.

The cumulative effect of these retail price increases can be substantial. On average, retail prices of the 207 most widely used prescription drug products that have been on the market since the end of 2004 have increased by 41.5 percent during the subsequent five-year period (2005 through 2009), compared with a general inflation rate of 13.3 percent. For a consumer who takes three brand name prescriptions on a chronic basis, the average annual retail cost of therapy for three drug products used to treat chronic conditions rose by almost $1,900 during this five-year period.

All but 6 of the 217 brand name prescription drug products in the study's market basket had retail price increases during 2009. All of these retail price increases exceeded the rate of general inflation during the year. This was true for all of the manufacturers with at least two drug products in the market basket, and for all therapeutic categories.

Retail drug prices have a direct impact on costs borne by Medicare Part D enrollees. Retail price increases at the pharmacy result in higher out-of-pocket costs for beneficiaries who pay a percentage of drug costs rather than a fixed copayment. Higher retail prescription prices also mean that enrollees will get to the "doughnut hole"—the gap in coverage where enrollees have to pay all of their drug costs—much sooner. In 2008, 23 percent of non-low income Part D enrollees hit the doughnut hole.[12] And once enrollees are in the doughnut hole, they directly absorb the entire effect of higher retail prescription prices.

The recently-passed health care reform legislation has provisions that are designed to phase out the Medicare Part D coverage gap through discounts on brand name, biologic, and generic prescription drugs. Part D enrollees will continue to be exposed to the effects of the doughnut hole until the legislation's provisions are fully implemented in 2020. However, the value of closing the doughnut hole, while potentially substantial, could be eroded over the years if escalating drug prices are not addressed.

[12] A. Varghese, "Beneficiary Experience in the Coverage Gap and Catastrophic Phase," Centers for Medicare & Medicaid Services, 2010 Part D Data Symposium, March 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.[13] Recently, AARP and the PRIME Institute have created an additional drug price index based on retail prices from the Thomson Reuters MarketScan® Research Databases.[14] Thus, we have used the same market basket of brand name 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 or insurers and whether the rebates and discounts sometimes given to payers are being passed along to their clients. This new retail data will be used as the primary data source for AARP's Rx Price Watch reports beginning with this report and moving forward. As 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.

[13] 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 (MDDB®). 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 [MDDB®], July 2003, published on the Medi-Span Website: http://www.medispan.com.)

[14] 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.

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. [15] 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.

There are 549 drug products in the overall (combined) market basket (220 brand name, 185 generic, and 144 specialty drug products). [16] 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, [17] 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.

[15] Although the original sample contained 220 brand name prescription drugs, Zyrtec 10 mg tablets went over-the-counter in January 2008 and was excluded from the analysis. In addition, Risperdal 0.25 mg tablets and Risperdal 4 mg tablets were excluded due to insufficient price data.

[16] 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.

[17] 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.

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."[18]

Monitoring Retail Drug Prices

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 or insurers and whether or not the rebates and discounts sometimes given to payers are being passed along to their clients.

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.[19] The data used in the Rx Price Watch analyses are drawn from the Thomson Reuters MarketScan® 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.[20] 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

[18] Available on the AARP website, http://www.aarp.org/health/medicare-insurance/info-04-2009/rx_watchdog.html.
[19] 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.
[20] 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.

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 25th and 75th 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.

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 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 to keep the market basket constant over time 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."[21]

[21] Available on the AARP website, http://www.aarp.org/health/medicare-insurance/info-04-2009/rx_watchdog.html.

APPENDIX B: THERAPEUTIC CATEGORY ACRONYMS

Therapeutic Category	Definition
Antidepressants (**SNRIs**)	**SNRI** – Serotonin-Norepinephrine Reuptake Inhibitors
Antihypertensives (**ACEs**)	**ACE** – Angiotensin-Converting Enzymes
Antihypertensives (**ARBs**)	**ARB** – Angiotensin II Receptor Blockers
Antihypertensives (**BBs**)	**BB** – Beta Blockers
Antihypertensives (**CCBs**)	**CCB** – Calcium Channel Blockers
Cholesterol Agents (**HMG CoA**)	**HMG CoA** – HMG CoA Reductase Inhibitors
Ulcer Drugs (**PPIs**)	**PPI** – Proton Pump Inhibitors

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