AARP Public Policy Institute

Rx Price Watch Report

March 2012

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

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Rx Price Watch

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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.

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

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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 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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TRENDS IN RETAIL PRICES OF PRESCRIPTION DRUGS WIDELY USED BY MEDICARE BENEFICIARIES 2005 TO 2009

AARP Public Policy Institute's first look at retail prices for a combined set of widely used prescription drugs finds that the cumulative change in retail prices was almost double the rate of inflation between 2005 through 2009. For a consumer who takes a prescription drug on a chronic basis, this translates into an increase in the annual cost of therapy of more than $1,000 over the same time period. These findings are attributable entirely to drug price growth among brand and specialty drugs, which more than offset substantial price decreases among generic drugs.

AARP's Public Policy Institute finds that retail price increases for a combined set of prescription drugs have exceeded the price increases for other consumer goods and services in recent years. This finding is consistent with the pattern that we have seen since we first started tracking manufacturers' prescription drug prices in 2004.

In 2009, the average annual increase in retail prices for 514 brand name and generic versions of traditional and specialty prescription drugs widely used by Medicare beneficiaries[1] was 4.8 percent, while the general inflation rate was -0.3 percent over the same time period.

Previous reports by the AARP Public Policy Institute have focused on retail price changes for traditional outpatient prescription drugs (both *brand name* and *generic drugs)* and *specialty* prescription drugs (also including both *brand name* and *generic drugs*). Separate analyses of the price changes for these groups of drugs are reported because these sets of drugs are typically made by different drug manufacturers and their prices are subject to different market dynamics, pricing, and related behaviors. However, it is also useful to view the average price change for the combined market basket of outpatient prescription drugs widely used by Medicare beneficiaries in order to determine the trend across all types of prescription drugs.

Specifically, this report compares prescription drug price changes to the rate of general inflation from one year to the next. The report focuses on changes in retail prices, or the amount that is actually charged to consumers (and/or insurers).[2] Annual and five-year cumulative price changes through the end of 2009 are presented, using both rolling average and point-to-point estimates (see Appendix B). The first set of findings shows

[1] The original combined market basket included 549 drug products. However, Zyrtec 10 mg tablets went over-the-counter (that is, became available without a prescription) in January 2008. As over-the-counter drugs do not accurately reflect price changes in prescription drugs, it was dropped from the analysis. In addition, two brand name drug products and 32 specialty drug products were excluded due to insufficient price data.

[2] A brief overview of how the combined market basket was developed is provided in Appendix A.

annual rates of change in retail prices for widely used prescription drugs from 2005 through 2009. Additional findings summarize the *cumulative* impact of retail drug price changes that have taken place during the five-year period from 2005 through 2009.

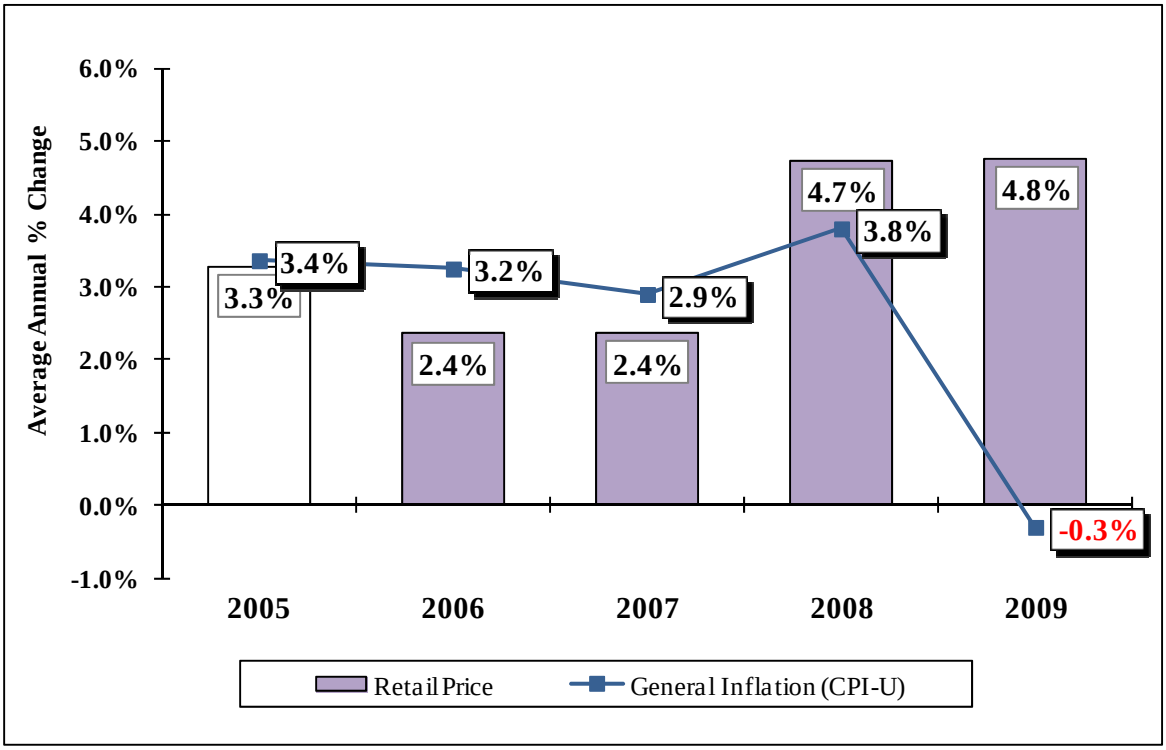
FINDINGS

I. Annual Percent Change in Retail Prices Most Widely Used Prescription Drugs

- Retail prices for the AARP combined set of drug products most widely used by Medicare beneficiaries rose 4.8 percent in 2009, when measured as a 12-month rolling average and weighted by total 2006 sales to Medicare Part D beneficiaries (Figure 1).

- The AARP combined average annual increase in 2008 (4.7 percent) was notably higher than the rates of increase for retail prices in 2005, 2006, and 2007, which ranged from 2.4 percent to 3.3 percent.

Figure 1: Average Annual Percent Change in Retail Prices for AARP Combined Market Basket of Most Widely Used Prescription Drugs Increases Slightly in 2009



Note: 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 increase in retail prices for the AARP combined set of drug products was lower than the corresponding rate of general inflation[3] in 2005, 2006, and 2007. This finding can be attributed to marked decreases in average retail prices for widely used generic prescription drugs over the same time period.

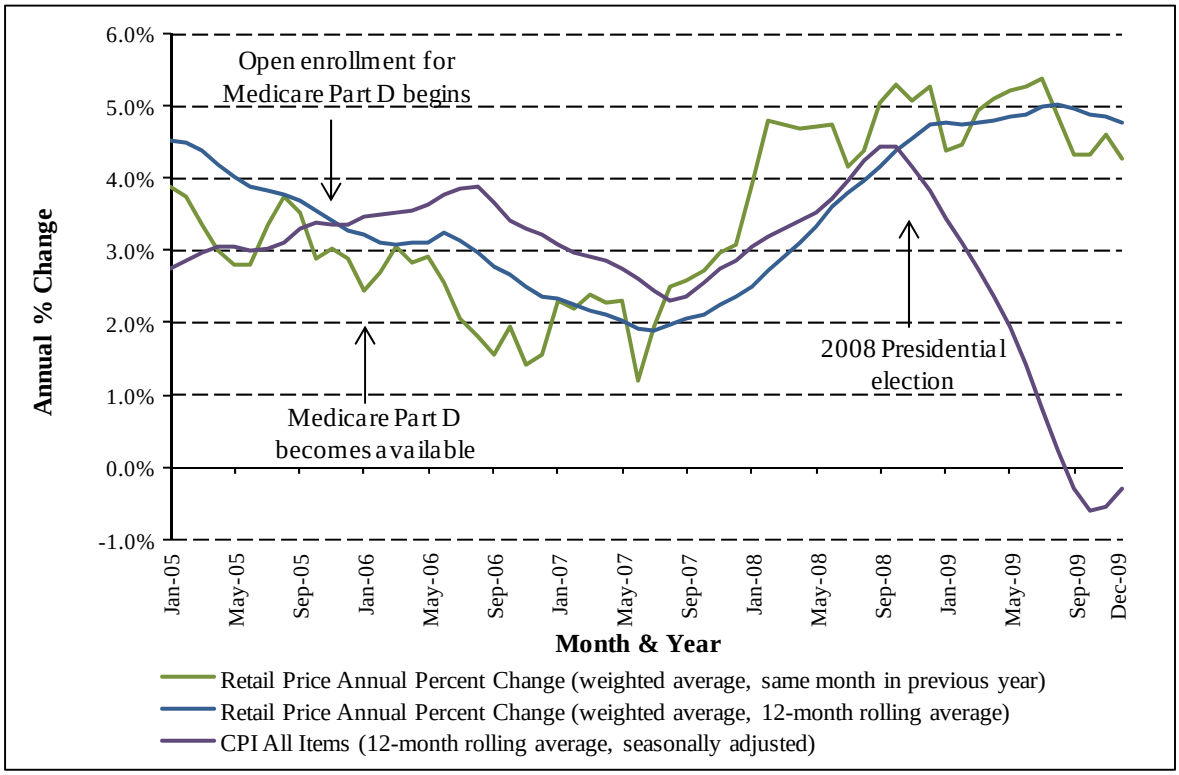
- Two of the three market baskets (brand and specialty drugs) experienced substantial price increases of 8.3 percent and 8.9 percent in 2009, while the third market basket (generic drugs) decreased 7.8 percent in 2009.[4]

By averaging annual point-to-point price changes for each month in a 12-month period (referred to as a *rolling average* change), the average annual retail price change reported in Figure 1 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 is 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] S. Schondelmeyer and L. Purvis, "Rx Price Watch Report: Trends in Retail Prices of Brand Name Prescription Drugs Widely Used by Medicare Beneficiaries, 2005 to 2009," August 2010; S. Schondelmeyer and L. Purvis, "Rx Price Watch: Trends in Retail Prices of Generic Prescription Drugs Widely Used by Medicare Beneficiaries, 2005 to 2009," July 2011; and S. Schondelmeyer and L. Purvis, "Rx Price Watch: Trends in Retail Prices of Specialty Prescription Drugs Widely Used by Medicare Beneficiaries, 2005 to 2009," December 2011". Available on the AARP website, http://www.aarp.org/rxpricewatch.

Figure 2: Rolling Average and Point-to-Point Changes in Retail Prices for AARP Combined Market Basket Have Increased Substantially Since Mid-2007

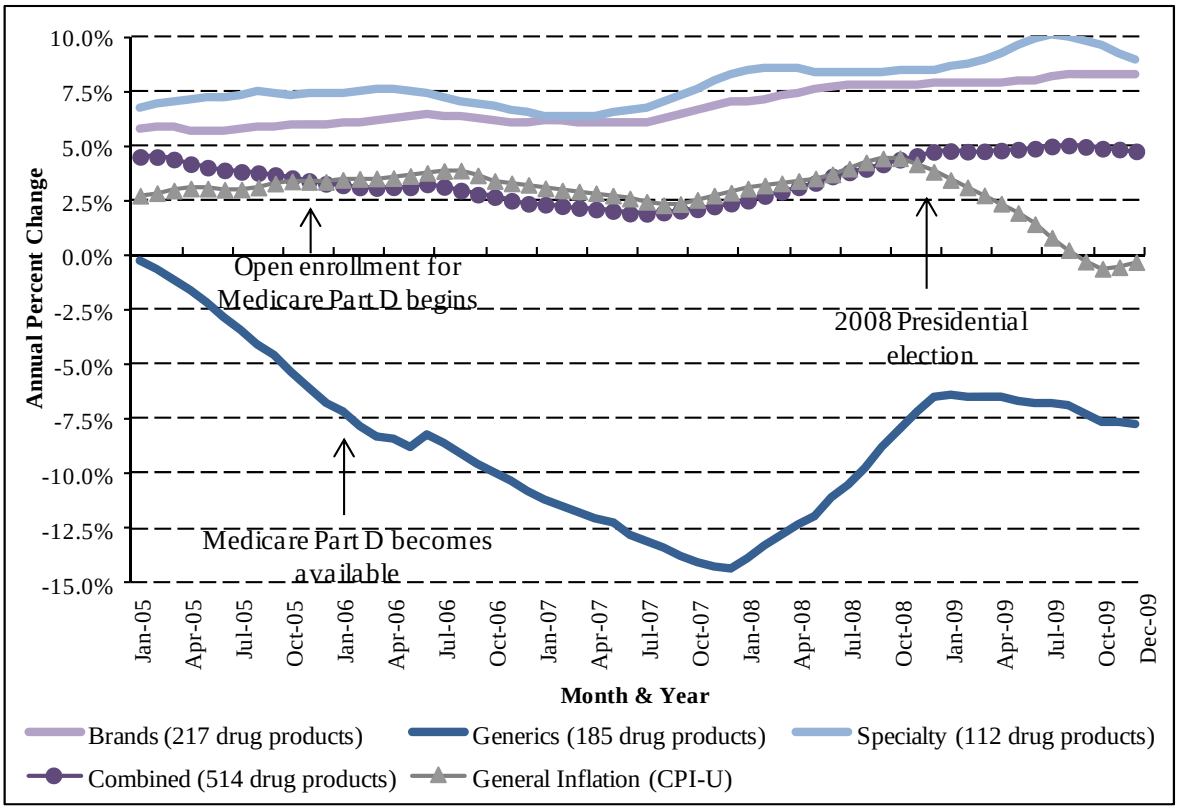


Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Thomson Reuters MarketScan® Research Databases.

Figure 2 shows that, on average, retail prices for the AARP combined market basket of prescription drugs have consistently exceeded the rate of general inflation since October 2008. The rolling average change in retail prescription prices was lower than the rate of inflation between December 2005 and November 2008, and the point-to-point average change in prices was lower than the rate of inflation between October 2005 and August 2007. However, both rates again surpassed the slowing rate of general inflation by the end of 2008.

The annual trends seen in the combined market basket reflect retail price changes in the brand, generic, and specialty market baskets. As Figure 3 shows, the rates of price increase in the brand and specialty market baskets have, in general, substantially exceeded the rate of general inflation since at least January 2005, when measured as a 12-month rolling average and weighted by actual 2006 sales to Medicare Part D beneficiaries. In contrast, on average, retail prices for generic drugs have been consistently declining (that is, an average negative change in the retail price) over the same time period.

Figure 3: Components of Annual Percent Change in Retail Prices in AARP Combined Market Basket of Most Widely Used Prescription Drugs, 2005 to 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 marked decreases in average retail prices in the generic market basket that took place between 2005 and 2007 had a strong impact on the average annual increase in retail prices for the combined index, dropping the rate of increase slightly below the rate of general inflation for almost three years. This finding is particularly striking given that generics already have comparatively low prices and represented a relatively small share (22.1 percent) of total drug expenditures by Medicare Part D plans in 2006. However, since 2008, the continued growth in drug prices for the brand and specialty market baskets has more than offset the still substantial decreases in retail prices for generics.

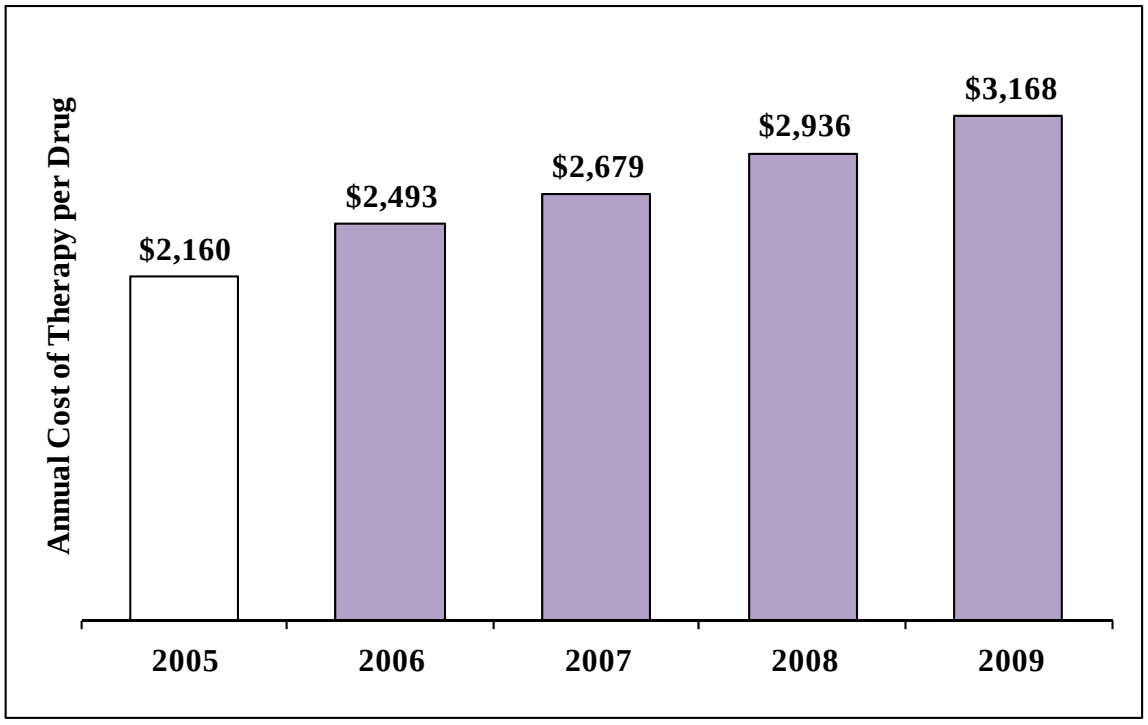
II. Annual Cost of Therapy for Most Widely Used Prescription Drugs

Retail price changes for the 441 most widely used drugs for treating chronic conditions (out of a total market basket of 514 drugs) were translated into average annual costs of therapy (Figure 4).[5]

- The AARP combined average annual cost of therapy was $3,168 per year for each prescription drug in 2009, assuming that the consumer uses the drug for a chronic condition.

- The average annual cost of therapy for the most widely used drugs used for treating chronic conditions increased by 46.7 percent between 2005 and 2009.

Figure 4: Average Annual Cost of Therapy in AARP Combined Market Basket of Most Widely Used Prescription Drugs Is $3,168 in 2009



Notes: Shaded bars indicate years when Medicare Part D was operational. Does not include 73 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 cost of therapy for *brand name* drug products most widely used by Medicare beneficiaries for chronic conditions was $1,382 in 2009.

[5] 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.

- The average annual cost of therapy for *specialty* drug products for most widely used by Medicare beneficiaries for chronic conditions was $28,838 in 2009.

- The average annual cost of therapy for *generic* drugs most widely used by Medicare beneficiaries for chronic conditions was $234 in 2009.

While insurance may cover much of this cost for some beneficiaries, it would not cover the costs for Medicare Part D enrollees in the "doughnut hole"[6] (the period when beneficiaries were traditionally responsible for 100 percent of their prescription costs).[7]

III. Five-year Cumulative Impact of Retail Price Changes for Widely Used Prescription Drugs, 2005–2009

- More than nine-tenths (469 of 514) of the most widely used drugs in the combined 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 change in retail prices over a five-year period for these 469 drug products (the AARP Combined set) was 25.6 percent, compared with 13.3 percent for general inflation.[8]

Eighty-seven percent (406 of 469) of the 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 cost of therapy for these drug products was $1,152 higher than five years earlier, assuming that the consumer used these drugs for chronic conditions.

[6] The cost impact on beneficiaries is based on the continued use of the brand name drug product. 77 of the 302 brand name drug products in the combined market basket had generic equivalents introduced to the market between 2006 and 2009, making it possible for the beneficiary to save money if he or she switched to a less expensive, therapeutically-equivalent generic drug product.

[7] This "gap" in coverage generally begins after the beneficiary has $2,930 (in 2012) in total drug costs and continues until the beneficiary spends $4,700 in out of-pocket drug costs. Centers for Medicare & Medicaid Services, "Announcement of Calendar Year (CY) 2012 Medicare Advantage Capitation Rates and Medicare Advantage and Part D Payment Policies and Final Call Letter," April 4, 2011. 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 began receiving a 50 percent discount on their brand name and biologic prescription drugs and a 7 percent discount on their generic prescription drugs while they are in the coverage gap. 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.

[8] The five-year average cumulative growth rate was 57.3 percent for all drugs in the market basket, including acute medications and drugs that were not on the market for the entire five-year period. This number was calculated by compounding the average annual growth rate (as shown in Figure 1) for each year from 2005 to 2009.

CONCLUDING OBSERVATIONS

The findings of this report show that average annual increases in retail prices for widely used prescription drugs have exceeded the rate of general inflation in recent years. These findings are attributable entirely to drug price growth among brand and specialty drugs, which more than offset substantial price decreases among generic drugs.

This study focused on the retail drug price changes for a combined set of prescription drug products, which were measured by combining the brand name, generic, and specialty market baskets used in previous AARP Public Policy Institute reports into a single composite index. Average annual increases in retail prices for the 514 most widely used prescription drugs continued to exceed the rate of general inflation. The annual average rate of increase was 4.8 percent in 2009, while the general inflation rate was -0.3 percent over the same time period.

In contrast to the combined set of drugs most widely used by Medicare beneficiaries, the retail prices for brand name drug products rose by 8.3 percent in 2009, and the retail prices for specialty drug products rose by 8.9 percent. Retail prices for generic drug products fell by 7.8 percent in the same year. The combined set of retail drug product prices grew faster than the rate of inflation in 2008 and 2009, but somewhat slower than the rate of general inflation in previous years (2005 to 2007). This slower growth rate was attributable solely to the decrease in generic prices, as the brand and specialty price growth rates continued to outpace inflation over those years.

The cumulative effect of these retail price increases can be substantial. On average, retail prices of the 469 most widely used prescription drug products that have been on the market since the end of 2004 have increased by more than 25.6 percent from 2005 through 2009, compared with a general inflation rate of 13.3 percent. For a consumer who takes a prescription drug on a chronic basis, the average increase in the cost of therapy for a drug product used to treat chronic conditions rose from $2,160 to $3,168 between 2005 and 2009.

Retail drug price increases have a direct impact on the costs borne by Medicare Part D enrollees. Retail price increases result in higher prices at the pharmacy and higher out-of-pocket costs for those beneficiaries who pay all, or a percentage, of drug costs rather than a fixed copayment. Higher retail prices can also increase the number of Part D enrollees who reach the coverage gap, where they directly absorb the effect of higher retail prescription prices. Moreover, higher retail prices are more likely to push beneficiaries beyond the coverage gap and into catastrophic coverage, where they are responsible for a percentage of their drug costs, further exposing them to price increases. This would also cause Medicare spending to increase, as it covers 80 percent of Part D enrollees' costs once they enter catastrophic coverage.

The recently-passed health care reform legislation will gradually 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. In

addition, the value of closing the doughnut hole, while substantial, could be eroded over the years if escalating drug prices are not addressed.

APPENDIX A: OVERVIEW OF COMBINED MARKET BASKET OF DRUG PRODUCTS

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. [9] 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.[10] 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).[11] 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,[12] represented 7.4 percent of the Medicare Part D plan's expenditures and 1.3 percent of the plan's prescriptions (see Table 1).

[9] 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.

[10] Although the original sample contained 144 specialty prescription drugs, 32 of the drug products were excluded from the market basket and related analysis due to insufficient price data.

[11] 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.

[12] 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.

Table 1: Characteristics of Drugs Widely Used by Medicare Part D Beneficiaries

Type of Prescription	Share of Prescriptions	Share of Expenditures
Brand name	40.5%	70.4%
Generic	58.3%	22.1%
Specialty	1.3%	7.4%

Note: The expenditures and price per prescription referred to in this section represent the total amount paid to the pharmacy or provider (i.e., the sum of the Part D plan cost and the member cost sharing). Totals may not add up to 100 percent due to rounding.
Source: *PRIME* Institute, University of Minnesota, based on 2006 data from the Medicare Part D plan provider.

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.

Based on retail prescription drug prices from the Thomson Reuters MarketScan® Research Databases, price changes were determined by comparing the retail price for a drug product in a given month with the price for the same drug product in the same month in the previous year. A 12-month rolling average of these price changes was then calculated to determine an average annual price change.

Price changes for the three market baskets (brand, generic, and specialty) were combined using fixed weights proportional to the total expenditures for each market basket in 2006 (see "Share of Expenditures," Table 1). These weights remained fixed over time so that the combined index represented price changes and not changes in the mix of drugs prescribed and used.[13] A more detailed description of the process used for determining the market basket of drug products to be tracked, 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."[14]

[13] To enable us to measure the impact of price changes alone, the weights for the three market baskets remained fixed over time. Weights for drug products within a given market basket also remained fixed unless a specific drug product was withdrawn from the market, in which case these drug products were dropped from the market basket in subsequent periods, and the weights of other drug products were proportionately adjusted. New drug products that enter the market after 2006 will not be included in this index until the market basket is rebased with new Medicare Part D drug expenditure data.
[14] D. Gross, S. Schondelmeyer, and L. Purvis, "Rx Watchdog Report: Trends in Manufacturer Prices of Brand Name Prescription Drugs Used by Medicare Beneficiaries, 2002 to 2007," March 2008. Available on the AARP website, http://www.aarp.org/health/medicare-insurance/info-04-2009/rx_watchdog.html.

APPENDIX B: 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.[15] Recently, AARP and the PRIME Institute have created an additional drug price index based on retail prices from the Thomson Reuters MarketScan® Research Databases.[16] 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[17] 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.

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[15] 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.)

[16] 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.

[17] 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.

This appendix describes how the new retail data were refined and incorporated into the analysis.

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.[18] 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.[19] The Thomson Reuters MarketScan® Medicare Supplemental Database includes the Medicare-covered portion

[18] 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.
[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.

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^{th}, 25^{th} 75^{th} and 90^{th} 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 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."[20]

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

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