

TRENDS IN MANUFACTURER PRICES OF BRAND-NAME PRESCRIPTION DRUGS USED BY OLDER AMERICANS— 2006 YEAR-END UPDATE

INTRODUCTION

December 31, 2006 marked the end of the first full year of operation of the Medicare prescription drug benefit. One of the key features of this benefit was a structure of private prescription drug plans that, at least in theory, would be able to negotiate lower prices from manufacturers. This Data Digest reports on changes in manufacturer prescription drug prices in 2006 for the 193 brand-name prescription drugs most widely used by Americans age 50 and older. This report is part of an ongoing study of changes in drug manufacturer prices. Previous reports by the AARP Public Policy Institute identified steady increases in the average annual manufacturer price from calendar year 2000 through the first nine months of 2006.¹

These reports focus on changes in the prices that brand-name drug manufacturers charge to wholesalers and other direct purchasers for their sales to retail pharmacies. The manufacturer's charge to wholesalers is the most substantial component of a brand-name prescription drug's retail price. While this report does not provide data on drug rebates that plans are able to negotiate with manufacturers—such rebates are typically confidential—when manufacturers increase their price to wholesalers for a brand-name drug, the added cost is generally passed on in the retail price to most prescription purchasers.² Changes in drug manufacturers' prices are measured by changes in the wholesale acquisition cost (WAC) published in the Medi-Span Price-Chek PC database.³

This report presents three-month, annual, and seven-year cumulative price changes through the end of 2006, using both rolling average and point-to-point estimates (see methodological appendix).⁴ The first set of findings focuses on *three-month* rates of change for the fourth quarter (i.e., changes from September 30 through December 31, 2006). The second set of findings shows *annual* rates of change in manufacturers' prices for widely used brand-name drugs from 2000 through 2006, 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 price changes by manufacturer and by therapeutic category. The third set of findings summarizes the cumulative impact of manufacturer drug price increases that have taken place during the seven-year period from 2000 through 2006.

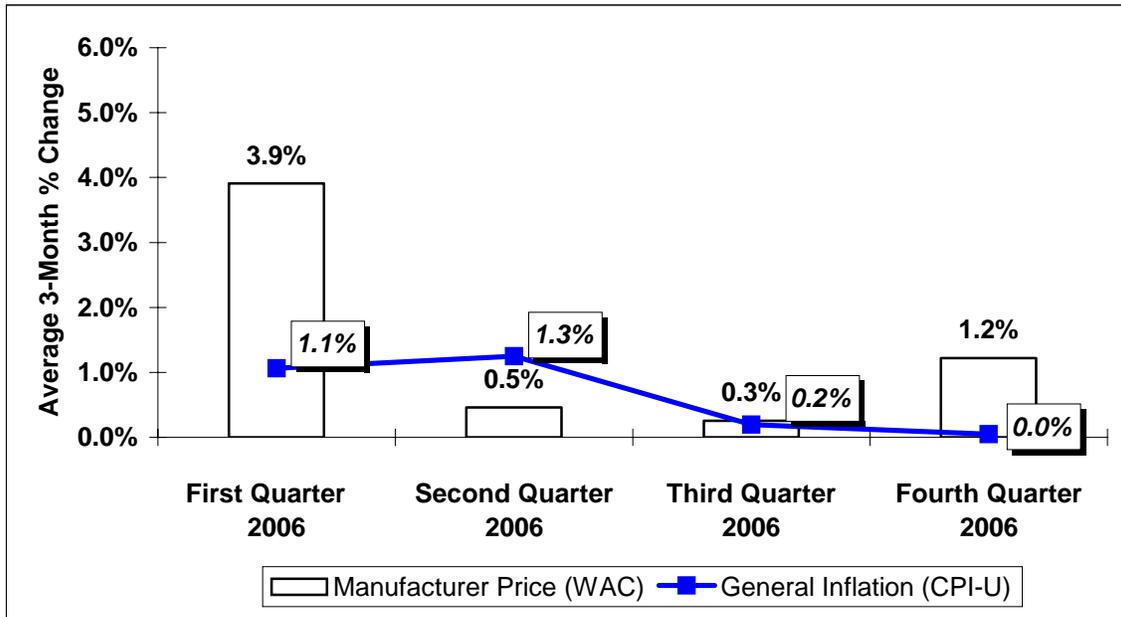
FINDINGS

I. Quarterly Trends in Manufacturer Price Changes for Most Widely Used Brand-Name Prescription Drugs

In order to track manufacturers' brand-name drug price changes for discrete time periods throughout the year, the three-month percentage change in price for the 193 brand-name prescription drugs most widely used by older Americans⁵ was calculated for each quarter

of 2006 (i.e., from December 31, 2005 through March 31, 2006; March 31 through June 30; June 30 through September 30; and September 30 through December 31, 2006) (Figure 1). This period includes the months when Medicare drug coverage was first available as a result of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003.

Figure 1: Quarterly Average Point-to-Point Percentage Changes in Manufacturer Prices for Most Widely Used Brand-Name Prescription Drugs, 2006



Average increases for 2006 exclude Vioxx 12.5 mg and 25 mg tablets, which were withdrawn from the market in September 2004, and Bextra 10 mg and 20 mg tablets, which were withdrawn from the market in April 2005. Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Medi-Span Price-Chek PC (Indianapolis, IN: Wolters Kluwer Health Inc., February 2007).

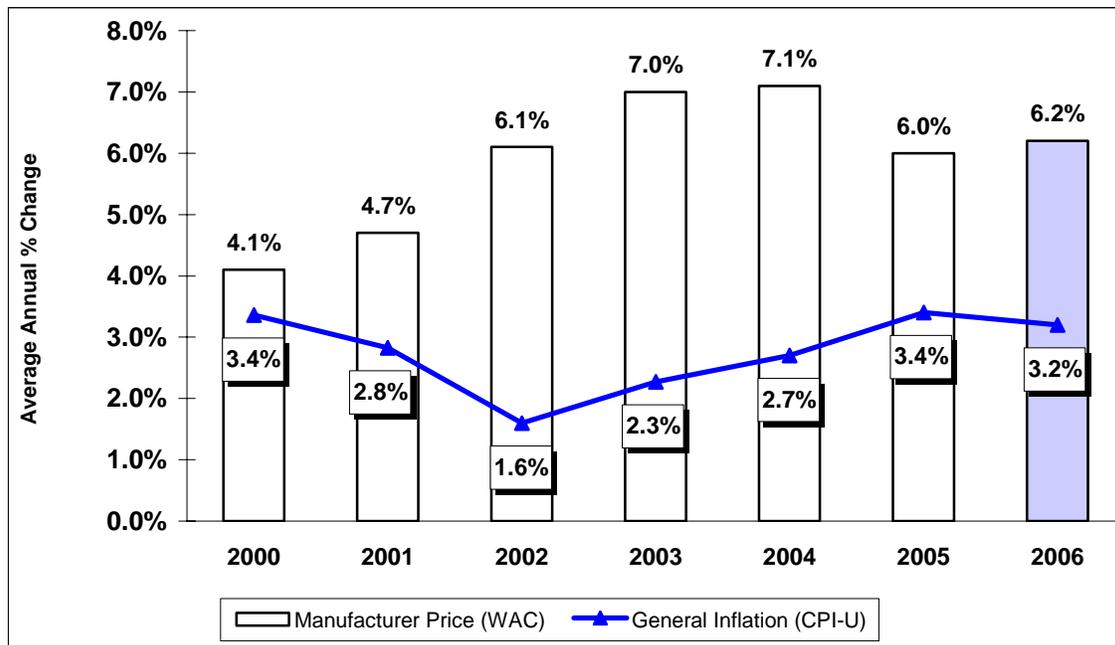
- Although there was no change in the general price level (as measured by the Consumer Price Index-All Urban Consumers, or CPI-U)⁶ during the fourth quarter of 2006, manufacturer drug price increased 1.2 percent, on average, during this period. In comparison, the third quarter 2006 price increase (0.3 percent) was slightly higher than the general inflation rate during the same period (0.2 percent).
- The fourth quarter average change for 2006 was identical to the 2002 and 2003 fourth quarter rates (1.2 percent each) and slightly higher than the 2000 and 2004 fourth quarter rates (1.0 percent each). It was above the 2001 rate for the same quarter (0.5 percent).

II. Annual Trends in Manufacturer Price Changes for Most Widely Used Brand-Name Prescription Drugs

Annual percent change in manufacturer prices

- Manufacturer prices for brand-name drugs rose 6.2 percent in 2006, when measured as a 12-month rolling average and weighted by actual 2003 sales to people age 50 and older (Figure 2).
- The average annual increase in 2006 was higher than the rate of increase in 2005. This is a reversal from 2005, when the average annual increase was lower than the rate of increase in 2004.
- Furthermore, average annual price increases for brand-name prescription drugs were nearly twice the rate of inflation in 2006; in 2005, the rate of increase was one and one-half times the rate of inflation.

Figure 2: Average Annual Percentage Change in Manufacturer Prices for Most Widely Used Brand-Name Prescription Drugs, 2000 through 2006



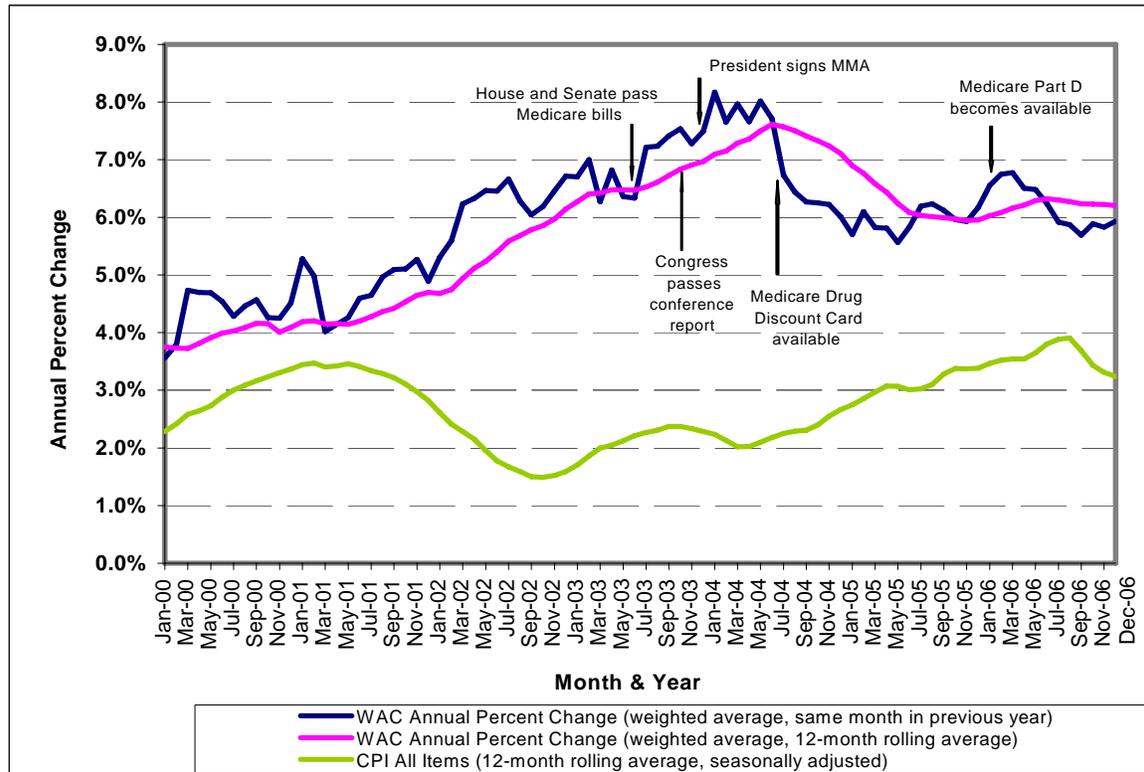
Average increases for 2004, 2005, and 2006 exclude Vioxx 12.5 mg and 25 mg tablets, which were withdrawn from the market in September 2004. Average increases for 2005 and 2006 also exclude Bextra 10 mg and 20 mg tablets, which were withdrawn from the market in April 2005.

Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Medi-Span Price-Chek PC (Indianapolis, IN: Wolters Kluwer Health Inc., February 2007).

The average annual price change reported in Figure 2 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 price that occurs for a single month (referred to as an annual *point-to-point* change). The percentage 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 price changes over the entire study period (Figure 3). Figure 3 shows that the average annual point-to-point change in prices began to accelerate in September 2006 after a period of decrease that began in March 2006.

Figure 3: Comparison of Rolling Average and Point-to-Point Changes in Manufacturer Prices for Most Widely Used Brand-Name Prescription Drugs, 2000 through 2006



Average increases for months after August 2004 exclude Vioxx 12.5 mg and 25 mg tablets, which were withdrawn from the market in September 2004. Average increases for months after March 2005 also exclude Bextra 10 mg and 20 mg tablets, which were withdrawn from the market in April 2005.

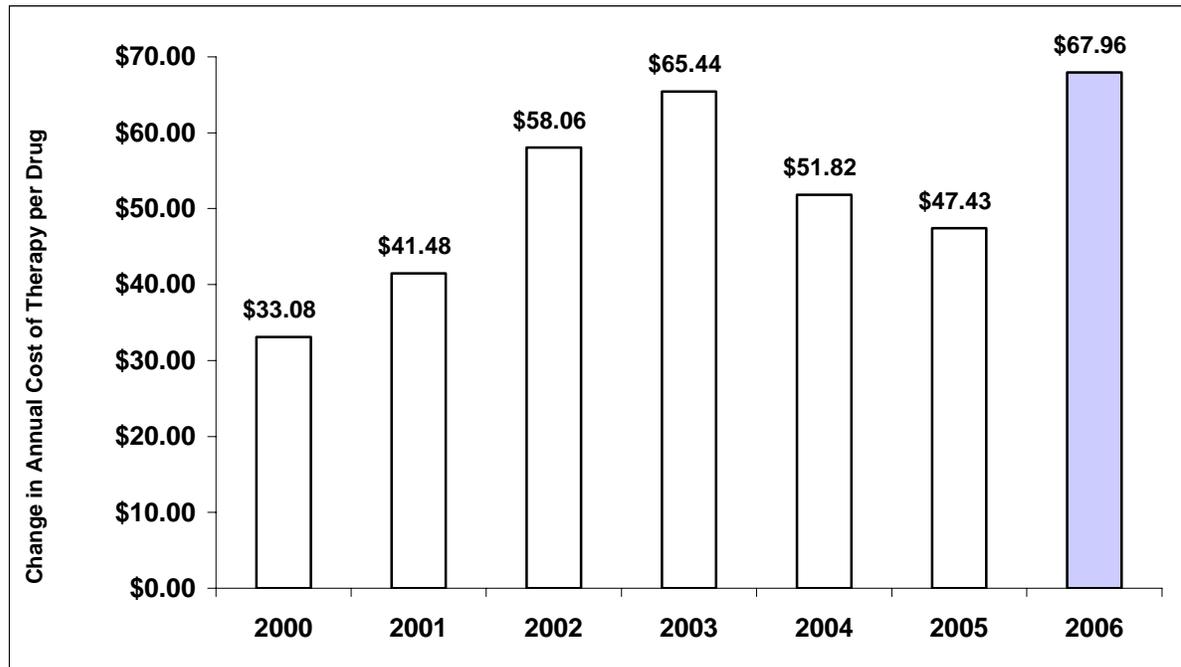
Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Medi-Span Price-Chek PC (Indianapolis, IN: Wolters Kluwer Health Inc., February 2007).

Change in annual cost of therapy

Manufacturer price increases for the 187 most widely used brand-name drugs used to treat chronic conditions (out of a total sample of 193 drugs) translated into increases in the average annual cost of therapy (Figure 4).

- The average annual increase in the cost of therapy was \$67.96 per prescription in 2006, the highest increase since this study was initiated.
- A typical older American (who takes four prescription drugs) is likely to have experienced an average increase in the cost of therapy of \$271.84 in 2006, assuming that the drugs are brand-name products and the full price increases were passed along to the consumer.

Figure 4: Average Change in Annual Cost of Therapy Due to Manufacturer Price Changes for Most Widely Used Brand-Name Prescription Drugs in the Treatment of Chronic Conditions, 2000 through 2006



Does not include six drugs used primarily for treatment of acute conditions.

Average increases for 2004, 2005, and 2006 exclude Vioxx 12.5 mg and 25 mg tablets, which were withdrawn from the market in September 2004. Average increases for 2005 and 2006 also exclude Bextra 10 mg and 20 mg tablets, which were withdrawn from the market in April 2005.

Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Medi-Span Price-Chek PC (Indianapolis, IN: Wolters Kluwer Health Inc., February 2007).

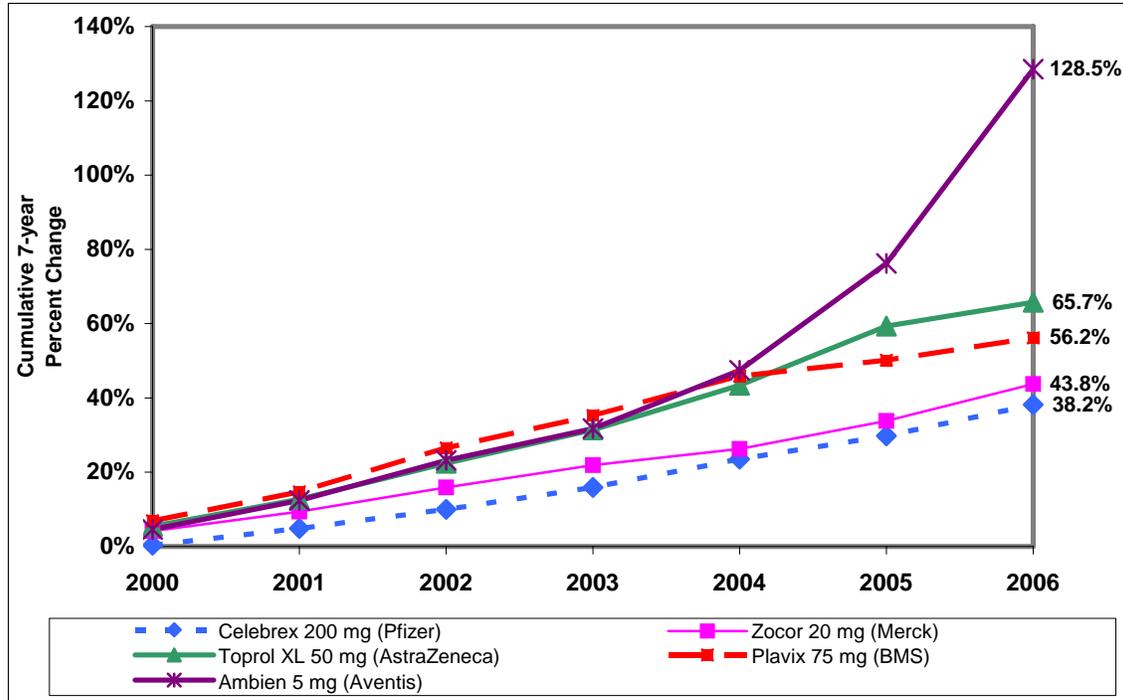
III. Cumulative Impact of Manufacturer Price Changes for Widely Used Prescription Drugs, 2000-2006

Cumulative percent change in manufacturer prices

- Of the 193 widely used drugs in the analysis, 153 have been on the market for the seven-year period from 2000 through 2006. Cumulatively, the average manufacturer price increase for these 153 brand-name drugs was over two-and-one-half times the general inflation rate—53.6 percent compared with 20.1 percent inflation (based on a 12-month rolling average).⁷
- Figure 5 illustrates the cumulative effect of manufacturer price changes over the seven-year period between 2000 and 2006 for five specific drugs. Four of these drugs were chosen because they are among the 25 most widely used drugs in the sample: Celebrex 200 mg capsules (Pfizer), used in the treatment of arthritis pain; Zocor 20 mg tablets (Merck), used to treat high cholesterol; Plavix 75 mg tablets (Bristol-Myers Squibb), a platelet aggregation inhibitor; and Toprol XL 50 mg tablets (AstraZeneca), a beta blocker. The fifth drug, Ambien 5 mg (Aventis), a

sleep aid, was chosen because it had the largest percentage price increase in 2006 among all drugs in the sample.

Figure 5: Cumulative Percent Change in Manufacturer Price for Five Widely Used Brand-Name Prescription Drugs, 2000-2006



Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Medi-Span Price-Chek PC (Indianapolis, IN: Wolters Kluwer Health Inc., February 2007).

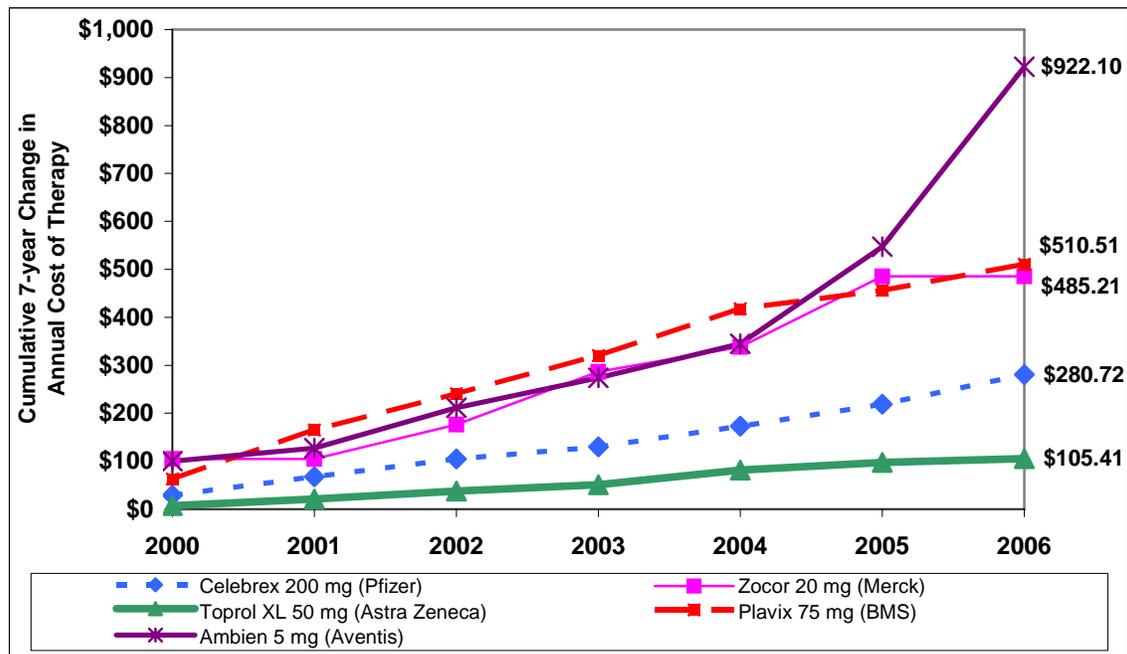
- As shown in Figure 5:
 - The manufacturer price of Ambien 5 mg rose nearly 130 percent over the entire seven-year period, when measured as a 12-month rolling average change. This growth was largely driven by a 20 percent increase in 2005 and a 30 percent increase in 2006.
 - The manufacturer prices of Plavix 75 mg tablets and Toprol XL 50 mg tablets increased cumulatively by over 56 percent and nearly 66 percent, respectively, over the seven-year period.
 - The manufacturer prices of Zocor 20 mg tablets and Celebrex 200 mg capsules each increased by about 40 percent over the same seven-year period.

Cumulative change in annual cost of therapy

- Of the 153 drugs that have been on the market since 2000, 147 are used to treat chronic conditions. By the end of 2006, the average annual cost of therapy for

these drugs was \$368 higher than seven years earlier, assuming that manufacturers' price increases were passed along to the consumer in the form of higher prices. For a typical consumer who takes four brand-name medications, this translates into an average increase in annual therapy costs of \$1,472 between December 31, 1999 and December 31, 2006.

Figure 6: Cumulative Change in Annual Cost of Therapy Due to Manufacturer Price Changes for Five Widely Used Brand-Name Prescription Drugs, 2000-2006



Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Medi-Span Price-Chek PC (Indianapolis, IN: Wolters Kluwer Health Inc., February 2007).

- As shown in Figure 6:
 - A consumer who started using Ambien 5 mg in 1999 would have paid over \$900 per year more for her treatment at the end of 2006 than she did at the end of 1999, again assuming that manufacturers' price increases for Ambien were passed along as higher retail prices.
 - A consumer using Plavix 75 mg tablets would have paid just over \$500 more per year than she did at the end of 1999, and a consumer using Zocor 20 mg tablets would have paid almost \$500 more per year for that product at the end of 2006 than she did seven years earlier.
 - A consumer using Celebrex 200 mg capsules would have paid nearly \$300 more per year, while a consumer using Toprol XL 50 mg tablets would have paid over \$100 more per year by the end of the seven-year period.

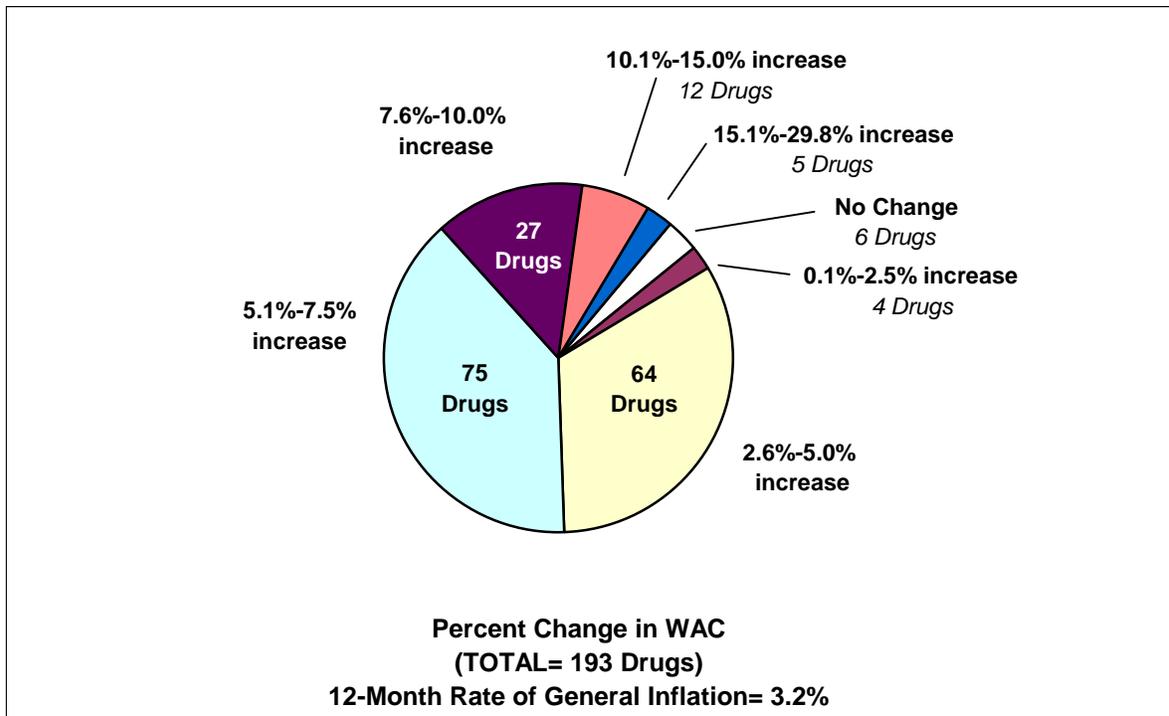
IV. Manufacturer Price Changes for Most Widely Used Brand-Name Prescription Drugs in 2006

Distribution of manufacturer price changes

All but six of the 193 most widely used brand-name prescription drug products in the sample had increases in manufacturer prices during 2006, when measured as a 12-month rolling average (Figure 7).

- 177 price increases exceeded the rate of general inflation (3.2 percent).
- 119 of the drugs had manufacturer price increases of more than 5.0 percent during 2006, including 27 drugs with price increases between 7.6 percent and 10.0 percent, 12 drugs with increases between 10.0 and 15.0 percent, and 5 drugs with increases of more than 15.0 percent.
- 33 of the 187 drug products with price changes in 2006 had more than one manufacturer price increase during the year, including two products with more than three price increases during the year.

Figure 7: Distribution of Percentage Changes in Manufacturer Prices for Most Widely Used Brand-Name Prescription Drugs, 2006

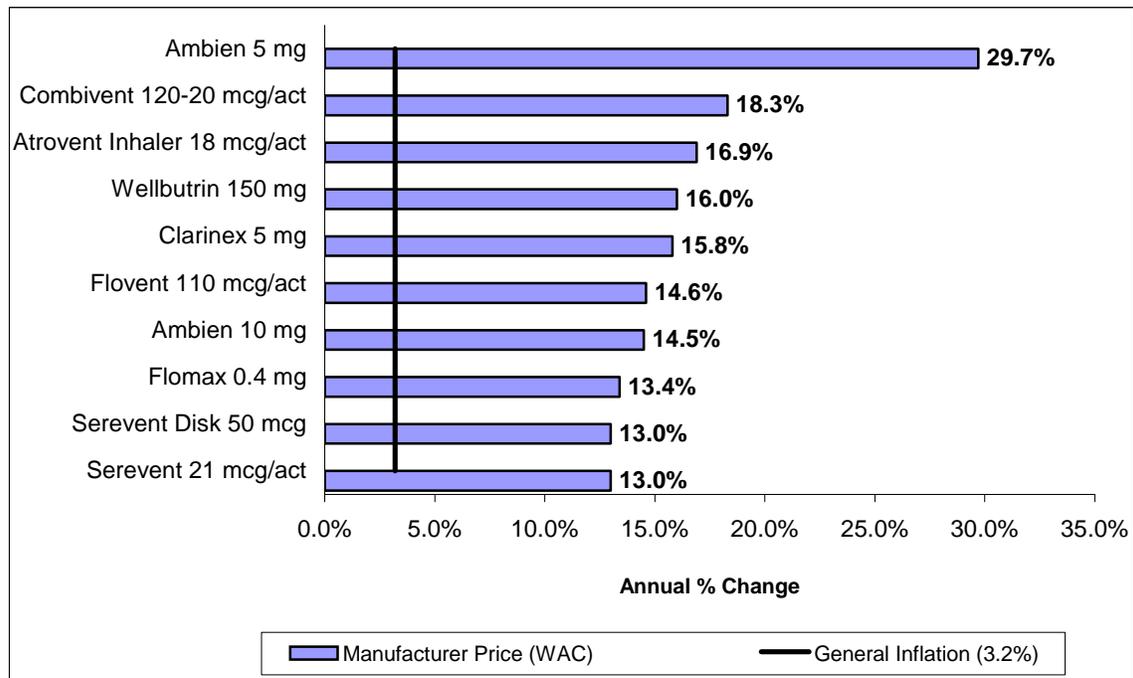


Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Medi-Span Price-Chek PC (Indianapolis, IN: Wolters Kluwer Health Inc., February 2007).

- Six drugs (Foltx 2.5-25-1 mg, Zoloft 25 mg, Zoloft 50 mg, Zoloft 100 mg, and both package sizes of Miralax 3350 mg) had no change in manufacturer price in 2006, and four additional drugs (Premarin 1 mg, Cipro 500 mg, Ultracet 37.5-325 mg, and Pletal 100 mg) had manufacturer price increases that were lower than the rate of inflation in 2006. All of these drugs except Premarin have generic versions on the market.

Ten brand-name drug products had increases in manufacturer price of at least four times the rate of general inflation, ranging from 13.0 percent to 29.7 percent (Figure 8). Of these seven drugs, all (except for Flomax 0.4 mg) were among the 33 drugs that had more than one price increase in 2006, including two drugs—Ambien 10 mg and Ambien 5 mg—that had four and five price increases, respectively, during the period.

Figure 8: Brand-Name Prescription Drug Products with Highest Percentage Change in Manufacturer Price, 2006



General inflation is based on CPI-U.

Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Medi-Span Price-Chek PC (Indianapolis, IN: Wolters Kluwer Health Inc., February 2007).

Of the 25 brand-name drugs with the greatest sales in 2003, 24 were on the market in 2006. (The remaining drug, Merck’s Vioxx 25 mg, was removed from the market in September 2004.) Among these 24 drugs, all had price increases during 2006, and all but two of these annual increases exceeded the rate of general inflation during the same period (3.2 percent). Five of these drugs had annual price increases that exceeded twice the rate of general inflation (Table 1).

Table 1: Annual Percentage Change in Manufacturer Prices for Top 25 Brand-Name Prescription Drug Products, 2006

Rank by Sales among Study Sample*	Product Name, Strength, and Dosage Form	Package Size	Manufacturer	Therapeutic Class	% Change in WAC
1	Fosamax 70 mg tab	4	Merck	Osteoporosis Agents	4.9%
2	Lipitor 10 mg tab	90	Pfizer	HMG CoA Reductase Inhibitors	6.5%
3	Plavix 75 mg tab	90	Bristol-Myers Squibb	Platelet Aggregation Inhibitors	4.0%
4	Lipitor 20 mg tab	90	Pfizer	HMG CoA Reductase Inhibitors	4.7%
5	Prevacid 30 mg cap Dr	100	TAP	Proton Pump Inhibitors	5.2%
6	Celebrex 200 mg cap	100	Pfizer	NSAIDs	6.5%
7	Protonix 40 mg tab	90	Wyeth	Proton Pump Inhibitors	4.9%
8	Norvasc 5 mg tab	90	Pfizer	Amlodipine Besylate	3.2%
9	Plavix 75 mg tab	30	Bristol-Myers Squibb	Platelet Aggregation Inhibitors	4.0%
10	Norvasc 10 mg tab	90	Pfizer	Amlodipine Besylate	3.2%
11	Nexium 40 mg cap	30	AstraZeneca	Proton Pump Inhibitors	4.0%
12	Flomax 0.4 mg cap	100	Abbott	Prostatic Hypertrophy Agents	13.4%
13	Actonel 35 mg tab	4	Proctor & Gamble	Osteoporosis Agents	6.0%
14	Xalatan Sol 0.005%	2.5	Pfizer	Prostaglandins - Ophthalmic	5.0%
15	Aricept 10 mg tab	30	Eisai	Antidementia	6.0%
16	Vioxx 25 mg tab	100	Merck	NSAIDs	N/A**
17	Ambien 10 mg tab	100	Sanofi Pharm	Non-Barbiturate Hypnotics	14.5%
18	Pravachol 40 mg tab	90	Bristol-Myers Squibb	HMG CoA Reductase Inhibitors	4.0%
19	Pravachol 20 mg tab	90	Bristol-Myers Squibb	HMG CoA Reductase Inhibitors	4.0%
20	Evista 60 mg tab	30	Lilly	Hormone Receptor Modulators	6.2%
21	Lipitor 40 mg tab	90	Pfizer	HMG CoA Reductase Inhibitors	4.7%
22	Toprol XL 50 mg tab	100	AstraZeneca	Beta Blockers Cardio-Selective	4.0%
23	Levaquin 500 mg tab	50	McNeil	Anti-Infective Agents	4.9%
24	Zocor 20 mg tab	30	Merck	HMG CoA Reductase Inhibitors	7.4%
25	Neurontin 300 mg tab	100	Pfizer	Misc. Anticonvulsants	5.9%
General inflation rate (as measured by growth in CPI-U)					3.2%

*Ranking based on dollar value of prescriptions processed by the AARP Pharmacy Service during 2003.

**Vioxx 25 mg was withdrawn from the market in September 2004.

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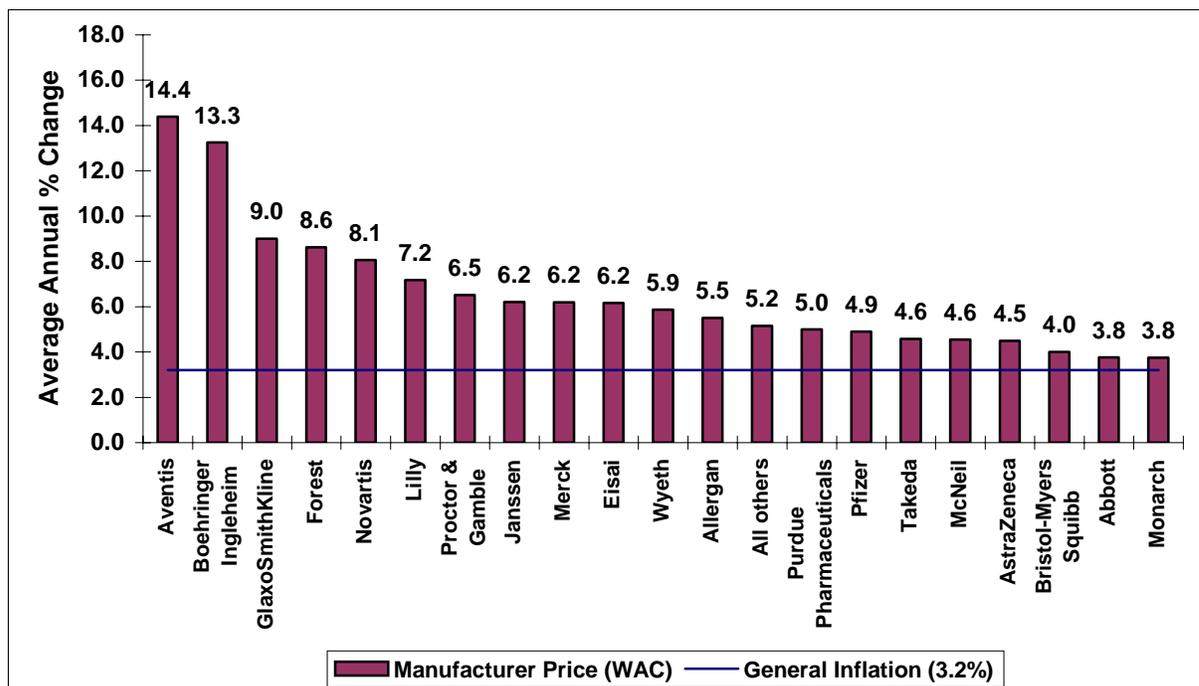
- The highest percentage change in manufacturer price during 2006 among the 25 brand-name drugs with the greatest sales in 2003 was for Aventis’ Ambien 10 mg tablets (14.5 percent).
- The lowest percentage change in manufacturer price increase during this period was for Pfizer’s Norvasc 5 mg and Norvasc 10 mg, for which the price increased 3.2 percent during 2006.

V. Manufacturer Price Changes for Most Widely Used Brand-Name Prescription Drugs, by Manufacturer and by Therapeutic Category

Of the 20 drug manufacturers with at least three drugs in the study of widely used brand-name drugs, all had average annual manufacturer price increases that exceeded the rate of inflation during 2006 (Figure 9).

- Two manufacturers—Aventis and Boehringer Ingleheim—had average annual price increases of more than four times the rate of general inflation (i.e., greater than 12.8 percent) during 2006.

Figure 9: Average Annual Percentage Change in Manufacturer Price for Brand-Name Prescription Drugs, by Manufacturer, 2006



Manufacturers with fewer than three drugs in the 2003 sample of most widely used brand-name prescription drugs are included in the “All Others” category. General inflation is based on CPI-U.

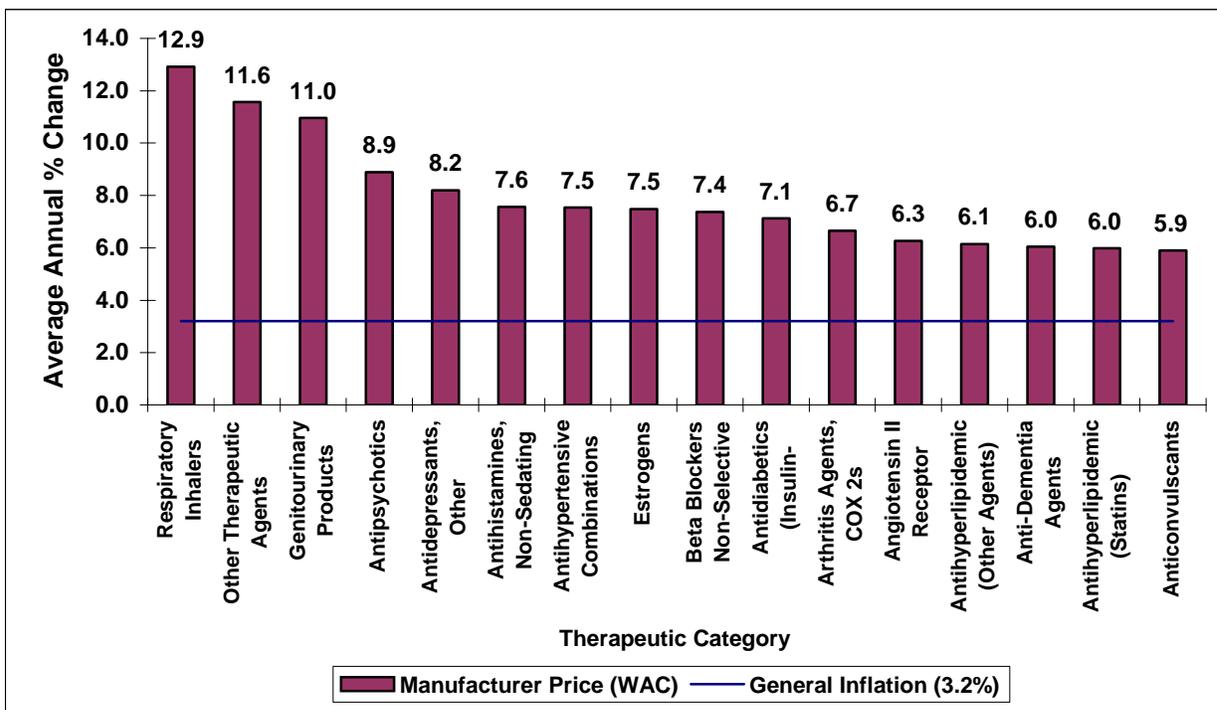
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- Including the manufacturer with the highest price increase, seven of the 20 manufacturers had average annual price increases of at least twice the rate of general inflation during 2006 (i.e., equal to or greater than 6.4 percent).

All of the 30 therapeutic categories of brand-name drugs had average annual manufacturer price increases that met or exceeded the rate of general inflation (3.2 percent) in 2006 (Figures 10a and 10b).

- The therapeutic category with the highest price increase—respiratory inhalers—had an average annual manufacturer price increase of more than four times the rate of general inflation in 2006 (i.e., greater than 12.8 percent).
- Including the therapeutic category with the highest increase, ten therapeutic categories (plus the “other therapeutic agents” category) had average annual manufacturer price increases of more than twice the general inflation rate during 2006 (i.e., greater than 6.4 percent).

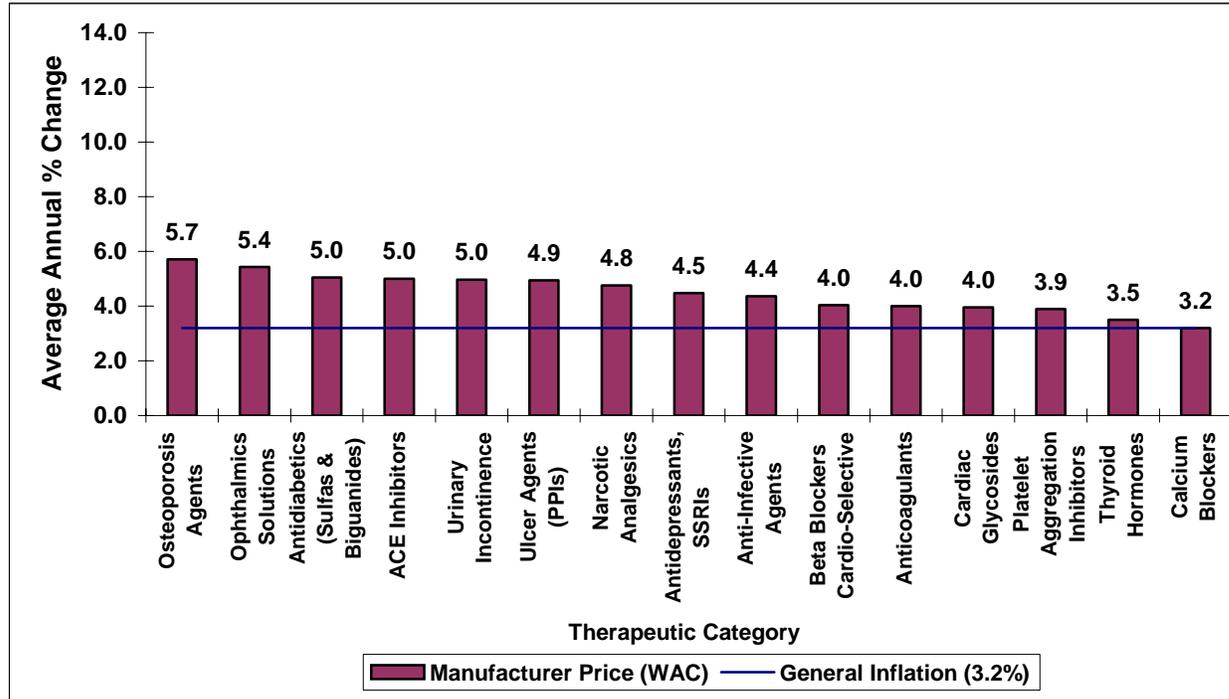
Figure 10a: Part 1—Average Annual Percentage Change in Manufacturer Price for Brand-Name Prescription Drugs, by Therapeutic Category, 2006



Therapeutic categories with fewer than three drugs in the 2003 sample of most widely used brand-name prescription drugs are included in the “Other Therapeutic Agents” category. General inflation is based on CPI-U.

Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Medi-Span Price-Chek PC (Indianapolis, IN: Wolters Kluwer Health Inc., February 2007).

Figure 10b: Part 2— Average Annual Percentage Change in Manufacturer Price for Brand-Name Prescription Drugs, by Therapeutic Category, 2006



Therapeutic categories with fewer than three drugs in the 2003 sample of most widely used brand-name prescription drugs are included in the “Other Therapeutic Agents” category. General inflation is based on CPI-U. Average increase for “Arthritis Agents, COX 2s” excludes Vioxx 12.5 mg and 25 mg tablets, which were withdrawn from the market in September 2004, and Bextra 10 mg and 20 mg tablets, which were withdrawn from the market in April 2005. Prepared by *PRIME* Institute, University of Minnesota, based on data from Medi-Span Price-Chek PC (Indianapolis, IN: Wolters Kluwer Health Inc., February 2007).

CONCLUDING OBSERVATIONS

Average annual increases in manufacturer prices charged to wholesalers for the 193 most widely used brand-name prescription drugs continued to substantially exceed the rate of general inflation (3.2 percent) in 2006. Reversing the trend between 2004 and 2005, when the average rate of increase in manufacturer drug prices fell, the 2006 growth rate (6.2 percent) represents an uptick from the 2005 average increase (6.0 percent).

The cumulative effect of these price increases can be substantial. On average, manufacturer prices of the 153 most widely used prescription drugs that have been on the market since the end of 1999 have increased by more than 53.6 percent during the subsequent seven-year period, compared with a general inflation rate of 20.1 percent. For a typical consumer who takes four brand-name prescription drugs, the average increase in the cost of therapy for drugs used to treat chronic conditions rose by nearly \$1,500 during this seven-year period.

All but six of the 193 brand-name prescription drug products in the sample had manufacturer price increases during 2006. A large majority (95 percent) of these increases exceeded the rate of general inflation during the year. Average annual price increases in 2006 exceeded the rate of general inflation for all manufacturers with at least three drugs in the sample, and for all therapeutic categories.

METHODOLOGICAL APPENDIX

This analysis is based on a sample of 197 brand-name drugs that are among the 200 most widely dispensed drugs (including both generic and brand-name drugs) or the 200 drugs with the highest sales levels among retail and mail-order prescriptions adjudicated by the AARP Pharmacy Service for 2003.⁸ Each product represents a unique combination of active chemical ingredient, strength, dosage form, package size, and manufacturer (for example, Prevacid 30 mg capsule, package of 100, TAP Pharmaceuticals). Products are identified by a unique 11-digit National Drug Code (NDC) identifier. In this analysis, when a manufacturer discontinues a NDC code for a particular product but assigns a new NDC to a product with the same chemical ingredient, strength, dosage form, and similar or identical package size as the product with the discontinued NDC, the products are considered the same for the purposes of tracking price per unit (i.e., tablet, capsules, etc.). Products are included in the analysis only for the time period that they were on the market.

Although the drugs studied were identified using AARP Pharmacy Service data, changes in prices charged by drug manufacturers to wholesalers were measured using changes in the wholesale acquisition cost (WAC) as published in the Medi-Span Price-Chek PC database.⁹ WACs are the prices typically reported on invoices between the manufacturer and the drug wholesaler.

WACs do not routinely capture the absolute level of prices paid (for example, they do not capture rebates that manufacturers pay to some third-party payers). Changes in the WAC, however, are the most consistent estimate available for change in both prices paid to manufacturers for brand-name drugs and the ingredient cost component of prices paid for those drugs by retail pharmacies. This is because manufacturers typically reference WAC or average wholesale price (AWP) as the basis for charging wholesalers and pharmacies that buy directly from drug manufacturers. In addition, nearly all third-party contracts (including both private programs and public programs such as Medicaid and Medicare) specifically reference WAC or AWP as the basis for determining prescription payment amounts. Furthermore, because Americans who must pay out-of-pocket for their own prescriptions (that is, “cash pay” consumers) typically do not have access to such rebates or discounts, the consideration of rebates is not relevant to an assessment of changes in drug prices for sales to the retail market segment. Finally, even if drug manufacturer rebates to third-party payers were to be considered, they typically provided only a modest decrease in drug price—about 2.0 to 5.0 percent of total drug spending by a drug benefit plan.¹⁰

This report calculates average drug price changes in the following ways:

- The 12-month *rolling average* percentage price change is calculated by first comparing each month’s price with the price in the same month of the previous year (e.g., January 2003 vs. January 2002, February 2003 vs. February 2002, etc.), and then taking the average of these point-to-point changes over the preceding 12 months. Thus, for example, the average

annual price changes for 2004 refer to the average of the price changes for each of the 12 months from January 2004 through December 2004 compared with the same months in the previous year.

- The *annual point-to-point* percentage price change is calculated as the percentage change in price for a given month compared with the same month in the previous year.
- The *three-month* percentage price change (*point-to-point*) is calculated as the percentage change in price from the last day of the previous quarter (e.g., June 30 for the third quarter price change) to the last day of the quarter (e.g., September 30).
- The *year-to-date* percentage price change (*point-to-point*) is calculated as the percentage change in price from the last day of the previous year (i.e., December 31st) to the last day of the quarter (e.g., September 30th).¹¹

When aggregate estimates of price or change in drug prices were calculated for this study, each drug product's value was weighted by the 2003 sales for that drug in the AARP Pharmacy Service. The AARP Pharmacy Service weights were used as a proxy for average drug use for all older Americans.

To assess the impact of price changes on dollars spent, an annual cost of therapy was calculated for each drug product. This analysis excludes the six products in the sample that are used primarily for treatment of acute conditions and typically taken for a limited period of time. The amount of a drug that an average adult person would take on a daily basis was determined using the "usual daily dose" reported in the Medi-Span Price-Chek PC database or, when this information was not available from Medi-Span, using dosing information in the U.S. Food and Drug Administration (FDA)-approved labeling for the drug product.

Analyses of manufacturer price changes are presented by drug manufacturer and by therapeutic category as well. The analysis of drug manufacturers reported separately on the 20 manufacturers with at least three drug products, accounting for 183 of the drug products among the 197 most widely used brand-name drugs. The analysis by therapeutic category reported separately on groupings of three or more drugs with a similar use or mechanism of action in treating patients. There were 30 therapeutic categories covering 183 of the drug products in the overall study sample.

¹ Previous reports in this series can be found on the AARP website at <http://www.aarp.org/research/health/carefinancing/aresearch-import-869-2004-06--IB69.html>.

² Rebates paid by brand-name drug manufacturers, if any, have not been taken into account in this analysis. Rebates generally do not benefit retail pharmacies or their "cash pay" customers, i.e., people who pay up front for their prescriptions because they have no drug coverage or they have indemnity insurance.

³ Medi-Span is a private organization that collects price data directly from drug manufacturers and wholesalers.

⁴ A brief description of the methodology used to produce these findings is provided in the methodological appendix. For a more detailed description of the methodology for the baseline study, including the rolling

average approach, see Gross et al., *Trends in Manufacturer Prices of Brand-Name Prescription Drugs Used by Older Americans, 2000 Through 2003*, AARP Public Policy Institute Issue Paper #2004-06 (Washington, DC: AARP), May 2004 (revised June 2004).

⁵ Although the original sample contained 197 brand-name prescription drugs, four of these drugs—Vioxx 12.5 mg tablets, Vioxx 25 mg tablets, Bextra 10 mg tablets and Bextra 20 mg tablets—were withdrawn from the market in September 2004 (Vioxx) and April 2005 (Bextra). As a result, only 193 drugs are analyzed for any period that includes April 2005 or subsequent months.

⁶ Specifically, 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), Bureau of Labor Statistics series CUSR0000SA0.

⁷ The average cumulative growth rate for all drugs in the sample was 49.1 percent. This number was calculated by compounding the average annual growth rate (as shown in Figure 2) for each year from 2000 to 2006.

⁸ Supra note 5.

⁹ Supra note 4.

¹⁰ See PriceWaterhouseCoopers, *Study of Pharmaceutical Benefit Management*, HCFA Contract No. 500-97-0399/0097, June 2001, p. 131; Patrick Holjo and Matthew Kamm, *Pharmacy Benefit Managers: Keeping a Lid on Drug Costs*, Banc of America Securities, February 20, 2002, p. 29.

¹¹ Year-to-date rates of change for time periods of nine months or less should not be compared to annual (i.e., 12 month) rates of change reported in this report series because the annual rates are based on rolling average estimates.

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