

TRENDS IN MANUFACTURER PRICES OF BRAND NAME PRESCRIPTION DRUGS USED BY OLDER AMERICANS— SECOND AND THIRD QUARTER 2004 UPDATE

INTRODUCTION

This Data Digest describes changes in the prices charged by prescription drug manufacturers through the first three quarters of 2004 (January through September) for the brand name prescription drugs most widely used by Americans age 50 and older. This report is part of a series of ongoing studies of changes in drug manufacturer prices—that is, the prices manufacturers charge for drugs they sell to wholesalers. A baseline study published in May 2004 by the AARP Public Policy Institute identified steady increases in the average annual manufacturer price from calendar year 2000 through calendar year 2003; a June 2004 update reported an acceleration of this trend during the first quarter of 2004.ⁱ

These reports focus on changes in the prices that brand name drug manufacturers charge to wholesalers and other direct purchasers for sales in retail pharmacies. The manufacturer's charge to wholesalers is the most substantial component of a brand name prescription drug's retail price. 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.ⁱⁱ Changes in drug manufacturers' prices are measured by changes in the wholesale acquisition cost (WAC) published in the Medi-Span Price-Chek PC database.ⁱⁱⁱ

This report presents three measures of price change during the second and third quarters of 2004 (see methodological appendix). The first set of findings shows *annual* rates of change in manufacturers' prices for widely used brand name drugs through the second and third quarters of 2004, using both rolling average and point-to-point estimates. The second set of findings focuses on *three-month* rates of change for the second and third quarters (i.e., changes from March 31 through June 30, 2004 and from June 30 through September 30, 2004). The third set of findings focuses on *year-to-date* percentage price changes through the first three quarters of the year (i.e., changes from December 31, 2003 through September 30, 2004).

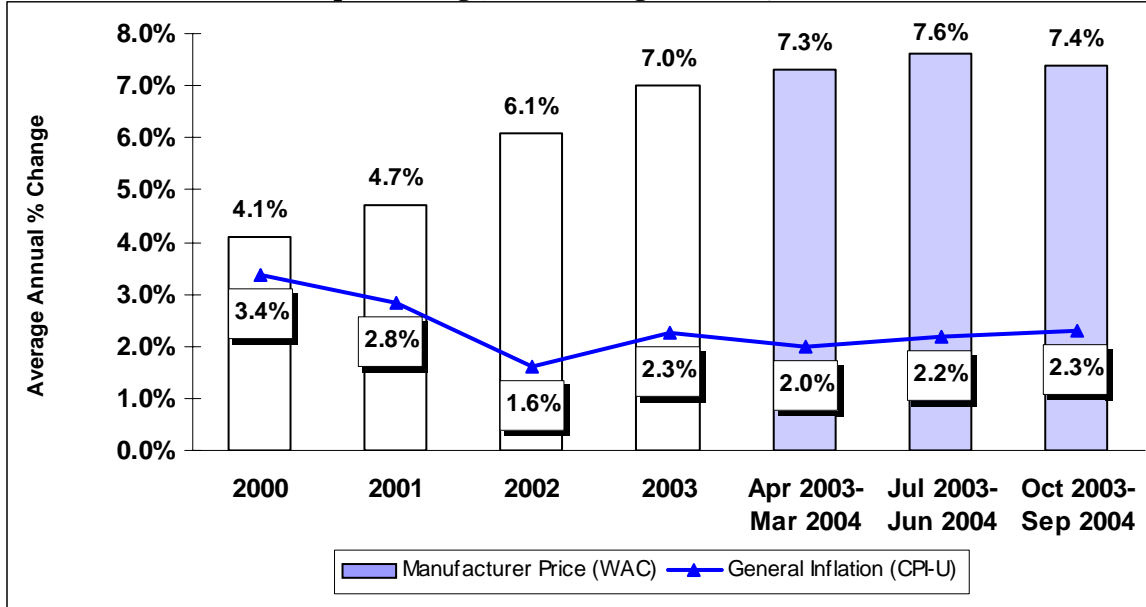
FINDINGS

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

The annual rate of increase in manufacturers' prices for the 197 brand name prescription drugs most widely used by older Americans for the years ending with the second and third quarters of 2004 continued to exceed both the rate of inflation (as measured by the Consumer Price Index-All Urban Consumers, or CPI-U)^{iv} and the rates of price increase in each of the previous four years (Figure 1).^v However, the rate

of price increase, which accelerated for the 12 months ending with the second quarter of 2004, slowed in the 12 months ending with the third quarter.

Figure 1: Average Annual Percentage Change in Manufacturer Prices for Most Widely Used Brand Name Prescription Drugs, 2000 through Third Quarter 2004^{vi}



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., October 2004).

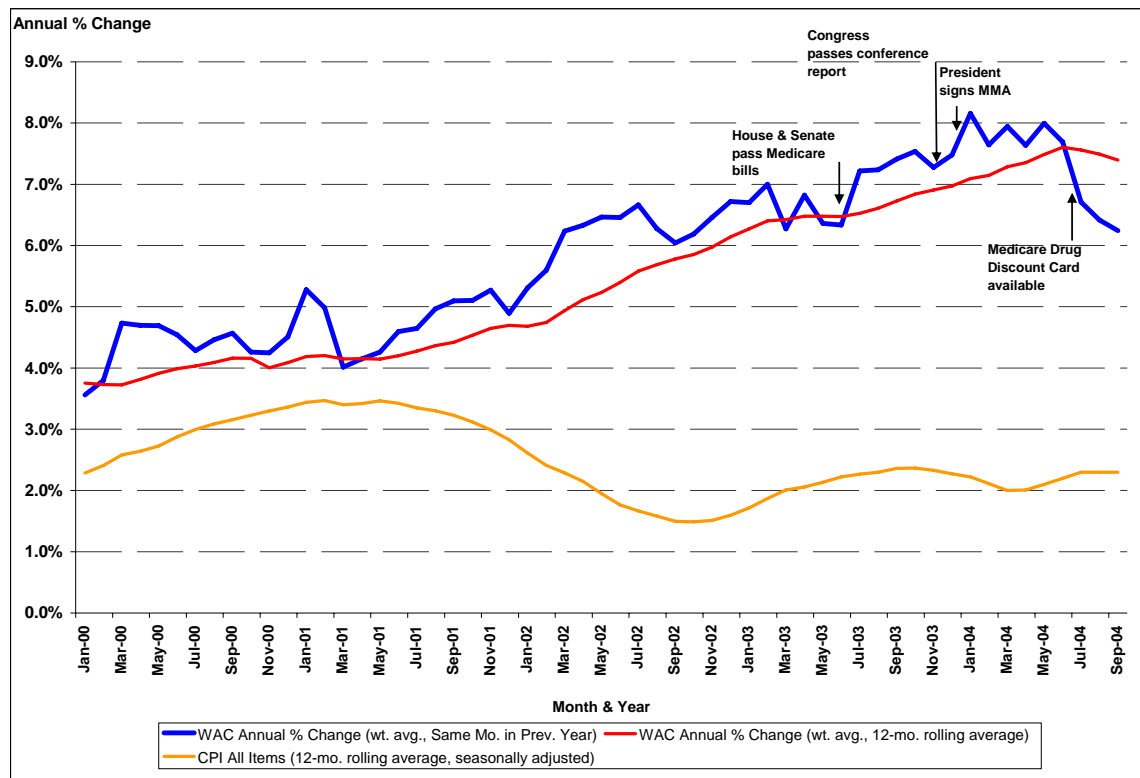
Annual percent change in manufacturer prices

- Manufacturer prices for brand name drugs rose 7.6 percent in the 12 months ending with the second quarter (June) of 2004, and 7.4 percent in the 12 months ending with the third quarter (September) of 2004, when measured as a 12-month rolling average and weighted by actual 2003 sales to people age 50 and older.
- The average annual price increase for brand name prescription drugs most widely used by older Americans was 3.5 times the rate of inflation for the 12 months ending with the second quarter of 2004, and 3.2 times the rate of inflation for the 12 months ending with the third quarter.
- The increase for the second quarter of 2004 (i.e., the 12 months ending in June 2004) represents an acceleration from the first quarter of the year (i.e., the 12 months ending in March 2004), during which time the average annual rate of increase in manufacturer price for the most widely used brand name prescription drugs was 7.3 percent. By comparison, the average annual rate of general inflation rose from 2.0 percent (for the 12 months ending with the first quarter of 2004) to 2.2 percent (for the 12 months ending with the second quarter of 2004).

- However, for the third quarter of 2004 (i.e., the 12 months ending in September 2004), the average annual rate of increase in manufacturer price for these drugs fell to 7.4 percent, while the average annual rate of general inflation rose to 2.3 percent.

The average annual 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 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 2). Figure 2 shows that manufacturer prices continued to rise rapidly in 2004 compared with the same months in 2003, but that the rate of price increase, which peaked in January 2004, declined consistently in the months since the June 2004 introduction of Medicare prescription drug discount cards.

Figure 2: Comparison of Rolling Average and Point-to-Point Changes in Manufacturer Prices for Most Widely Used Brand Name Prescription Drugs, 2000 through Third Quarter 2004



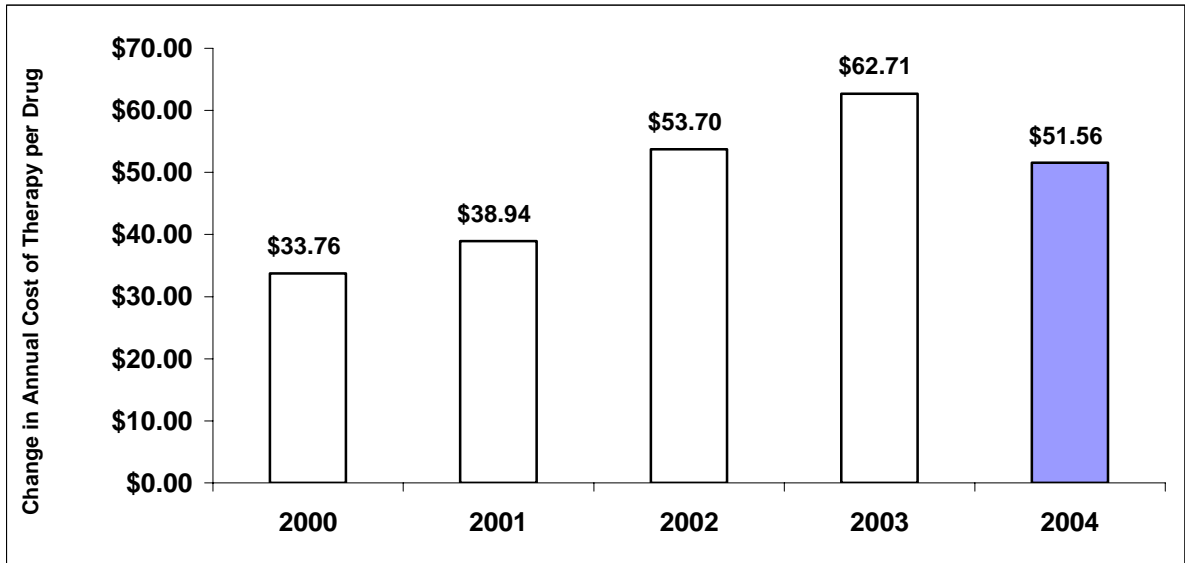
MMA refers to the Medicare Prescription Drug, Improvement, and Modernization Act of 2003. Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Medi-Span Price-Chek PC (Indianapolis, IN: Wolters Kluwer Health Inc., October 2004).

Change in annual cost of therapy

The average annual increase in the cost of therapy due to manufacturer price increases for the 191 most widely used brand name drugs used to treat chronic conditions (out of the total sample of 197 drugs) for the 12 months ending with the second quarter of 2004 was similar to the increase for the 12 months ending with the first quarter of 2004. However, the average annual increase for the 12 months ending with the third quarter of the year was substantially lower than for the 12-month periods ending with the previous quarters (Figure 3).

- The average annual increase in the cost of therapy was \$70.33 for the 12 months ending with the second quarter of 2004, and \$58.52 for the 12 months ending with the third quarter, compared with \$70.64 for the 12 months ending with the first quarter.
- A typical older American (who takes three prescription drugs) is likely to have experienced an average increase in the cost of therapy of \$175.56 for the 12 months ending with the third quarter of 2004, assuming that the drugs are brand name products and the full price increases were passed along to the consumer.

Figure 3: 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 Third Quarter 2004^{vii}



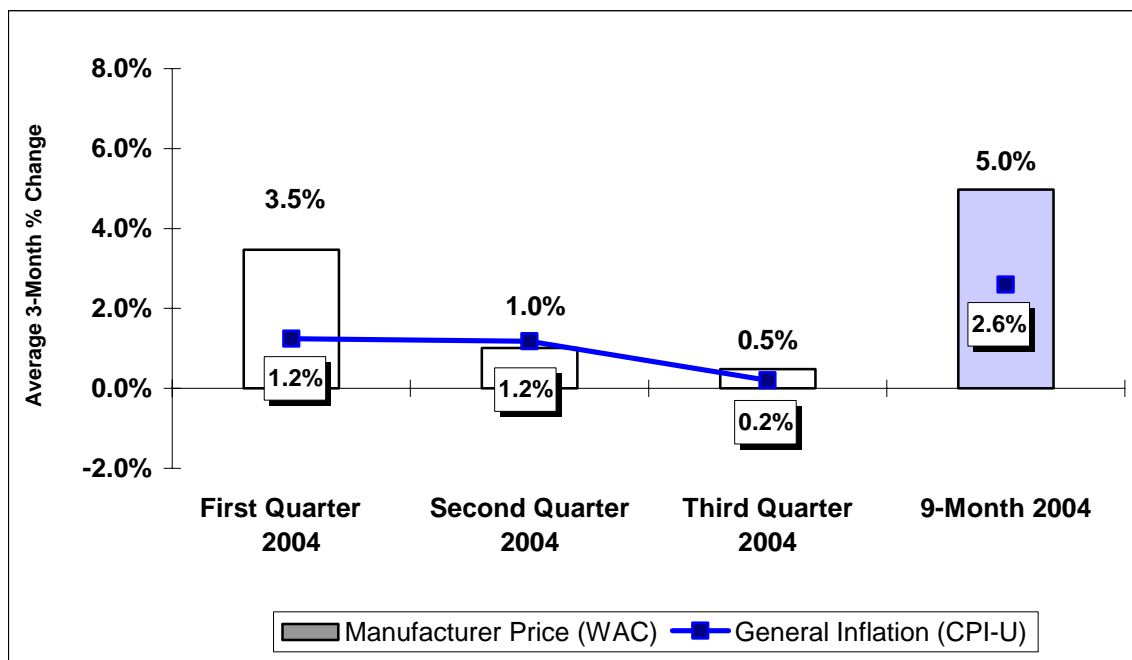
Does not include six drugs used primarily for treatment of acute conditions.

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., October 2004).

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

In order to track changes in prices charged by manufacturers for brand name drugs after the December 2003 enactment of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA), the three-month percentage price changes for each of the first three quarters of 2004 (i.e., from December 31, 2003 through March 31, 2004; March 31 through June 30; and June 30 through September 30) were analyzed for the 197 most widely used brand name drugs in the sample (Figure 4).

Figure 4: Three-Month and Year-to-Date Average Percentage Changes in Manufacturer Prices for Most Widely Used Brand Name Prescription Drugs, First Quarter Through Third Quarter 2004^{viii}



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., October 2004).

- Compared with the first quarter of 2004, the average price increase fell dramatically in the second and third quarters of 2004. After rising by 3.5 percent in the first quarter, manufacturer prices rose by only 1.0 percent in the second quarter and by only 0.5 percent in the third quarter.
- Although average price increases for the second and third quarter of any given year tend to be lower than first quarter increases, the second and third quarter changes for 2004 also were low compared with recent years. For example, the second quarter 2004 percentage price change was slightly below the 2002 and 2003 rates (1.2 percent each year) and the same as the 2001 rate (1.0 percent). In addition, the third quarter 2004 price change was substantially below any third quarter price change between 2000 and 2003 (percentage price changes in those years ranged from 0.8 percent to 1.8 percent). By contrast, the 2004 first quarter

price change exceeded the first quarter increases in 2000 (2.9 percent), 2001 (2.3 percent), and 2003 (3.0 percent), but was slightly below the 2002 rate (3.6 percent).

- While the second quarter 2004 price increase was slightly below the rate of general inflation during the same three-month period (1.2 percent), the third quarter 2004 price increase was more than double the rate of general inflation during the same 3-month period (0.2 percent).

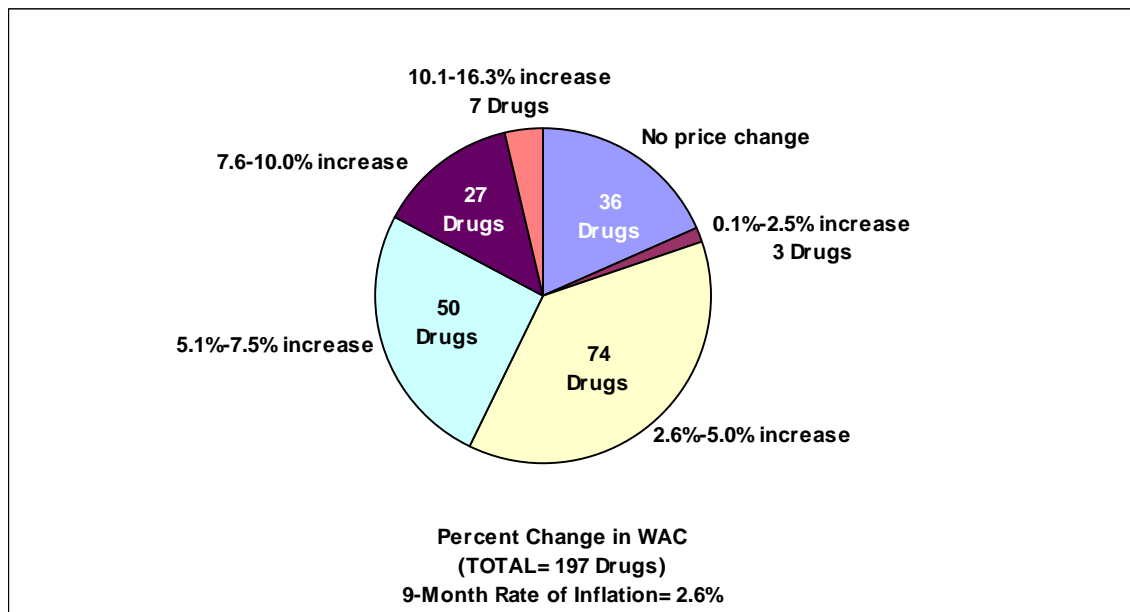
III. Year-To-Date Trends in Manufacturer Price Changes for Most Widely Used Brand Name Prescription Drugs

The average percentage price increase during the first three quarters of 2004 (i.e., from December 31, 2003 through September 30) was 5.0 percent (Figure 4). While manufacturer prices for the most widely used brand name drugs rose at nearly twice the rate of general inflation during the same period (2.6 percent^{ix}), the percentage price increase for the first nine months of 2004 was less than for the first nine months of 2003 (6.2 percent) and 2002 (5.8 percent) and only slightly above the 2001 rate (4.8 percent).

Distribution of year-to-date manufacturer price changes

Of the 197 most widely used brand name prescription drug products in our sample, 161 drugs had increases in manufacturer prices in the first nine months of 2004 (i.e., from December 31, 2003 through September 30, 2004). Manufacturer prices for the remaining 36 brand name prescription drugs did not change (Figure 5).

Figure 5: Distribution of Year-to-Date Percentage Changes in Manufacturer Prices for Most Widely Used Brand Name Prescription Drugs, First through Third Quarters 2004

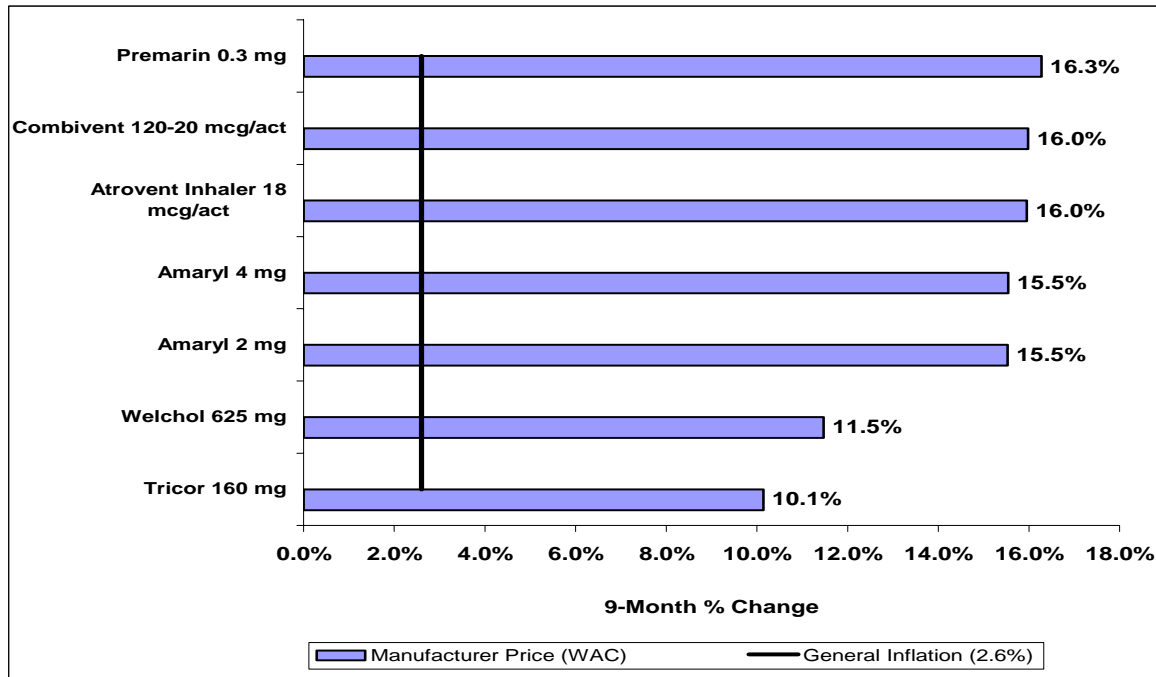


Prepared by the AARP Public Policy Institute and the PRIME Institute, University of Minnesota, based on data from Medi-Span Price-Chek PC (Indianapolis, IN: Wolters Kluwer Health Inc., October 2004).

- Among 161 brand name drugs with price increases during the first nine months of 2004, all but three exceeded the rate of inflation for the same period (2.6 percent).
- Eighty-four of the drugs most widely used by older Americans had manufacturer price increases of more than 5.0 percent during the first nine months of 2004, including 27 drugs with nine-month price increases between 7.6 percent and 10.0 percent, and an additional 7 drugs with increases of more than 10.0 percent.
- Of the 161 products with price changes in the first nine months of 2004, 68 had price changes during the second or third quarters, including 14 drugs for which the manufacturer price increased twice during the year and one drug for which the manufacturer price increased three times.

The seven brand name drug products with the highest nine-month manufacturer price increases (i.e., the change from December 31, 2003 through September 30, 2004) among the 197 drug products most widely used by older Americans had price increases ranging from 10.1 percent to 16.3 percent (Figure 6). All seven of these drugs were among the 14 that had multiple price increases during the first nine months of 2004, including the one drug—Premarin 0.3 mg—that had three price increases during the period.

Figure 6: Brand Name Prescription Drug Products with Highest Year-to-Date Percentage Change in Manufacturer Price, First through Third Quarters 2004



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., October 2004).

Focusing on the 25 brand name drugs with the greatest sales in 2003, 23 had price increases during the first nine months of 2004; all but one of these increases exceeded the rate of general inflation during the same period (2.6 percent). Two of the top 25 drugs had no price changes during the first nine months of 2004 (Table 1).

Table 1: Year-to-Date Percentage Change in Manufacturer Prices for Top 25 Brand Name Prescription Drug Products, First through Third Quarter 2004

Rank by Sales Among Study Sample*	Product Name, Strength, and Dosage Form	Package Size	Manufacturer	Therapeutic Class	% Change in WAC, December 31, 2003-September 30, 2004
1	Fosamax 70 mg tab	4	Merck	Calcium Regulators	4.9%
2	Lipitor 10 mg tab	90	Pfizer	HMG CoA Reductase Inhibitors	4.6%
3	Plavix 75 mg tab	90	Bristol-Myers Squibb	Platelet Aggregation Inhibitors	7.9%
4	Lipitor 20 mg tab	90	Pfizer	HMG CoA Reductase Inhibitors	2.9%
5	Prevacid 30 mg DR	100	TAP	Proton Pump Inhibitors	2.0%
6	Celebrex 200 mg	100	Pfizer	NSAIDs	5.0%
7	Protonix 40 mg	90	Wyeth	Proton Pump Inhibitors	3.3%
8	Norvasc 5 mg	90	Pfizer	Amlodipine Besylate	4.3%
9	Plavix 75 mg	30	Bristol-Myers Squibb	Platelet Aggregation Inhibitors	7.9%
10	Norvasc 10 mg	90	Pfizer	Amlodipine Besylate	4.2%
11	Nexium 40 mg	30	AstraZeneca	Proton Pump Inhibitors	3.9%
12	Flomax 0.4 mg	100	Abbott	Prostatic Hypertrophy Agents	0.0%
13	Actonel 35 mg	4	Proctor & Gamble	Calcium Regulators	6.0%
14	Xalatan Sol 0.005%	2.5	Pfizer	Prostaglandins - Ophthalmic	5.0%
15	Aricept 10 mg	30	Eisai	Antidementia	4.5%
16	Vioxx 25 mg	100	Merck	NSAIDs	4.8%
17	Ambien 10 mg	100	Sanofi Pharm	Non-Barbiturate Hypnotics	4.5%
18	Pravachol 40 mg	90	Bristol-Myers Squibb	HMG CoA Reductase Inhibitors	7.0%
19	Pravachol 20 mg	90	Bristol-Myers Squibb	HMG CoA Reductase Inhibitors	7.0%
20	Evista 60 mg	30	Lilly	Hormone Receptor Modulators	6.5%
21	Lipitor 40 mg	90	Pfizer	HMG CoA Reductase Inhibitors	2.9%
22	Toprol XL 50 mg	100	AstraZeneca	Beta Blockers Cardio-Selective	9.1%
23	Levaquin 500 mg	50	McNeil	Anti-Infective Agents	4.9%
24	Zocor 20 mg	30	Merck	HMG CoA Reductase Inhibitors	0.0%
25	Neurontin 300 mg	100	Pfizer	Misc. Anticonvulsants	6.4%
General inflation rate (as measured by growth in CPI-U), December 2003-September 2004					2.6%

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

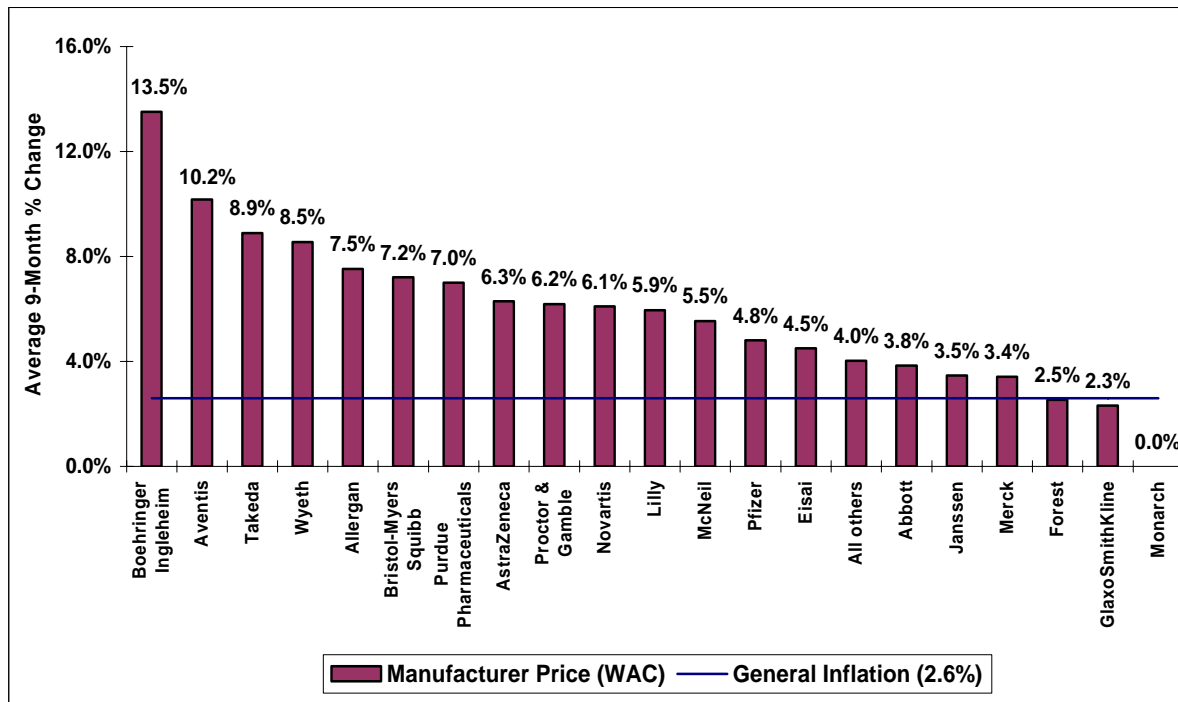
Prepared by the AARP Public Policy Institute and the *PRIME* Institute, University of Minnesota, based on data from Medi-Span Price-Chek PC (Indianapolis, IN: Wolters Kluwer Health Inc., October 2004).

- The highest percentage change in manufacturer price during the first nine months of 2004 (i.e., from December 31, 2003 through September 30, 2004) among the 25 brand name drugs with the greatest sales in 2003 was for Toprol XL 50 mg (9.1 percent). Toprol XL 50 mg had two increases in manufacturer price during the first nine months of 2004.
- The lowest percentage change in manufacturer price during this period was for Flomax 0.4 mg and Zocor 20 mg, both of which had no price changes, and Prevacid 20 mg DR, for which the price increased 2.0 percent—slightly below the rate of inflation during the same nine-month period.

Year-to-date manufacturer price changes for most widely used brand name prescription drugs, by manufacturer

Seventeen of the 20 drug manufacturers with at least three drugs in the study of widely used brand name drugs had manufacturer price increases that exceeded the rate of inflation during the first nine months of 2004 (i.e., from December 31, 2003 through September 30, 2004) (Figure 7).

Figure 7: Average Year-to-Date Percentage Change in Manufacturer Price for Brand Name Prescription Drugs, by Manufacturer, First through Third Quarters 2004



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.

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., October 2004).

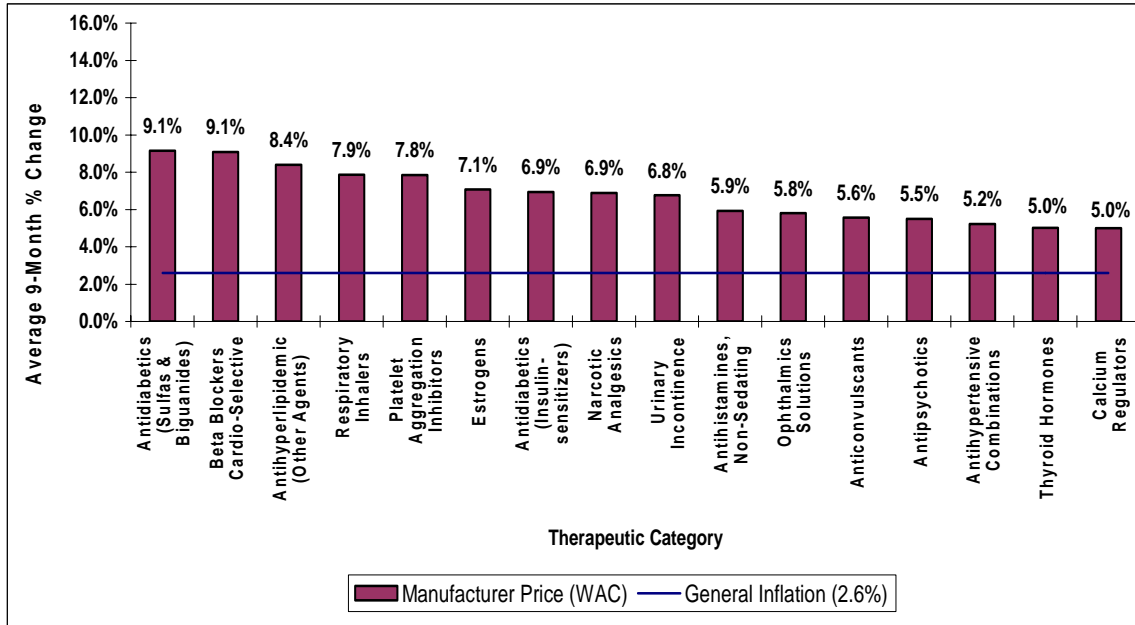
- Four manufacturers—Boehringer Ingelheim, Aventis, Takeda, and Wyeth—had average price increases of more than three times the rate of general inflation (2.6 percent) during the first three quarters of 2004.
- Including the four manufacturers with the highest price increases, more than one-half (12 of 20) had average nine-month price increases of more than twice the rate of general inflation during the first three quarters of 2004.
- One manufacturer—Monarch—had no price changes in the first nine months of 2004 for the sample of most widely used brand name drugs.

Year-to-date manufacturer price changes for most widely used brand name prescription drugs, by therapeutic category

Twenty-six of the 30 therapeutic categories of brand name drugs had average manufacturer price increases that exceeded the rate of general inflation (2.6 percent) during the first nine months of 2004 (i.e., from December 31, 2003 through September 30, 2004) (Figures 8a and 8b).

- Five of these therapeutic categories—antidiabetics (sulfas and biguanides), cardio-selective beta blockers, non-statin antihyperlipidemics, respiratory inhalers, and platelet aggregation inhibitors—had average nine-month manufacturer price increases of at least three times the rate of general inflation during the first three quarters of 2004.
- Including the five therapeutic categories with the highest price increases, 14 therapeutic categories had average nine-month manufacturer price increases of at least twice the rate of general inflation during the period.
- Two of the therapeutic categories had no change in manufacturer price during the nine-month period.

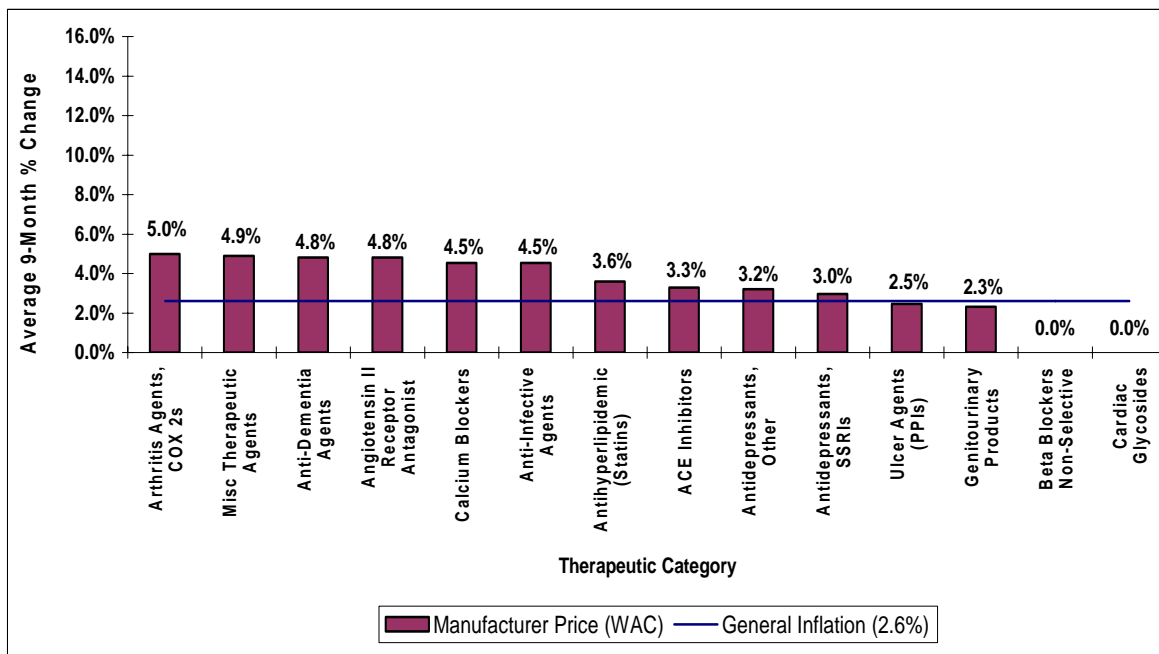
Figure 8a: Part 1—Average Year-to-Date Percentage Change in Manufacturer Price for Brand Name Prescription Drugs, by Therapeutic Category, First through Third Quarters 2004



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., October 2004).

Figure 8b: Part 2—Average Year-to-Date Percentage Change in Manufacturer Price for Brand Name Prescription Drugs, by Therapeutic Category, First through Third Quarters 2004



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 *PRIME* Institute, University of Minnesota, based on data from Medi-Span Price-Chek PC (Indianapolis, IN: Wolters Kluwer Health Inc., October 2004).

CONCLUDING OBSERVATIONS

Through the end of the third quarter of 2004, the average annual increase in manufacturer prices charged to wholesalers for widely used brand name prescription drugs continued to substantially exceed the rate of general inflation. While prices did not increase as fast in the second and third quarters of 2004 as they did in the first quarter of the year, the average annual increase for the 12-month period ending in September 2004 (7.4 percent when measured as a rolling average percent change) is still more than three times the annual rate of general inflation (2.3 percent).

More than 80 percent of the drugs in the sample—161 of 197—had increases in manufacturer price during the period from December 31, 2003 through September 30, 2004, and nearly all of these increases exceeded the rate of general inflation during the same nine-month period. Average nine-month price increases during the first three quarters of 2004 exceeded the rate of general inflation for 85 percent of the manufacturers with at least three drugs in the sample and a similar share of the therapeutic categories. However, some manufacturers and some therapeutic categories had little or no changes in manufacturer price during the first nine months of 2004.

The average change in manufacturer prices of widely used brand name prescription drugs during the first three quarters of 2004 (which corresponds to the first nine months following the signing of the MMA) was 5.0 percent—a lower rate than the average increases for either 2002 or 2003. This lower rate is partially attributable to the relatively low percentage increase in manufacturer prices during the second and third quarters, which included the first full quarter after the June 2004 introduction of Medicare prescription drug discount cards. Nevertheless, the year-to-date increase for 2004 is still nearly double the rate of general inflation during the same nine-month period.

ⁱ David J. Gross, Stephen W. Schondelmeyer, and Susan O. Raetzman, *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); *Trends in Manufacturer Prices of Brand Name Prescription Drugs Used by Older Americans—First Quarter 2004 Update*, AARP Public Policy Institute Issue Brief #IB69 (Washington, DC: AARP), June 2004.

ⁱⁱ Rebates paid by brand name drug manufacturers, if any, have not been taken into account in this analysis since they generally do not benefit retail pharmacies or their “cash pay” customers—that is, people who pay up front for their prescriptions because they have no drug coverage or have indemnity insurance.

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

^{iv} 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.

^v 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).

^{vi} The percentage price changes reported in Figure 1 for 2003 and the first quarter of 2004 differ slightly from those reported in the studies cited in note i. This change reflects our recent finding that the unique 11-digit National Drug Code (NDC) identifier was discontinued for two drugs in the sample—Neurontin 600 mg tablets (Pfizer) and Miacalcin 200 IU/AC spray (Novartis). The new NDC for Neurontin 600 mg was introduced in mid-December 2003, about three weeks before the old NDC was discontinued; both NDCs were for the same

active ingredient, strength, dosage form, and package size. The new NDC for Miacalcin 200 IU/AC was introduced in late November 2003, about five weeks before the old NDC was discontinued; the two NDCs differed only in the volume of medication provided and only slightly (3.7 ml for the new NDC, compared with 4.0 ml under the old NDC). While the previous analyses treated these products as having no price change, in fact, each of the NDC changes was associated with an increase in the daily cost of therapy. The manufacturer price associated with the new NDC for Neurontin 600 mg was more than 17 percent higher than the price of the old NDC. The introductory manufacturer price for the new NDC of Miacalcin 200 IU/AC was nearly 16 percent higher than the price of the old NDC. As a result of including these changes in the analysis, the average annual percentage price increase of 7.0 percent for 2003 is slightly higher than the previously reported 6.9 percent. Similarly, the revised increase for the 12-month period ending in March 2004 is 7.3 percent, compared with the previously reported 7.2 percent.

^{vii}The averages presented in Figure 3 for the year 2003 and the first quarter of 2004 differ from those reported in our earlier studies. See note iv.

^{viii}The first quarter results were reported in *Trends in Manufacturer Prices of Brand Name Prescription Drugs Used by Older Americans— First Quarter 2004 Update*, David J. Gross, Stephen W. Schondelmeyer, and Susan O. Raetzman, AARP Public Policy Institute Issue Brief #IB69 (Washington, DC: AARP), June 2004. The average increase presented in Figure 4 for the first quarter of 2004 differs from that reported in the June 2004 study. See note iv.

^{ix}The nine-month rate of inflation reported in Figure 4 (2.6 percent) exceeds the 12-month rate of inflation reported in Figure 1 (2.3 percent) because the 12-month rate includes periods of negative inflation in October and November 2003; during this time, the CPI-U (seasonally adjusted) fell from 185.1 to 184.6. In addition, the inflation rate reported in Figure 4 is a point-to-point estimate that measures the percentage difference in the CPI between two distinct points in time, while the rate reported in Figure 4 is a rolling average that reflects the average of point-to-point percentage changes in the CPI in each of the previous 12 months.

METHODOLOGICAL APPENDIX

The 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. 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.).

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.^a 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 provide only a modest decrease in drug price—about 2.0 to 5.0 percent of total drug spending by a drug benefit plan.^b

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 the third quarter of 2004 refer to the average of the price changes for each of the 12 months from October 2003 through September 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 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 for the first nine months of the year is calculated as the percentage change in price from December 31 of one year to September 30 of the following year.

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.

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

^b 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.

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The authors acknowledge the valuable technical assistance provided by Molly Melvin in the preparation of this Issue Brief.

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