Department of Health and Human Services

OFFICE OF INSPECTOR GENERAL

STRATEGIES TO REDUCE MEDICAID DRUG EXPENDITURES

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INSPECTOR GENERAL

OEI-12-90-00800

EXECUTIVE SUMMARY

PURPOSE

This report evaluates strategies currently used by State Medicaid Agencies and Canadian provinces in reducing their drug costs and proposes a series of actions to prevent unnecessary payments for prescription drugs.

BACKGROUND

The decade of the 1980's was marked by rapid escalation in health care costs. The prices of prescription drugs increased at a rate about four times the rate of consumer products taken as a whole. Also, drug manufacturing companies have been experiencing about three times the pretax profits of all manufacturing industries over the last decade.

In 1989, Medicaid State Agencies paid more than $3.6 billion for prescription drugs. Recently, States and the Congress have become increasingly concerned about these high and climbing costs. As a result, the Senate Special Committee on Aging asked us to conduct this inspection. The results were used in the formulation of Omniubus Budget Reconciliation Act of 1990 (OBRA '90). Some States have established restricted drug lists, known as closed formularies, to control their outlays for drugs. In combination with this, or as an alternative, many States have begun negotiating with drug manufacturers for discounts and rebates. However, manufacturers have frequently made open formularies a condition for price concessions to the states.

This report examines the impact of restricted drug lists on Medicaid drug costs. It also compares 1989 Canadian prices to U.S. prices as a measure of the magnitude of the potential Medicaid discounts that are available on brand name drugs. The Office of Inspector General issued a companion report, in draft, February 1991, comparing the U.S. and Canadian prices of multi-source drugs.

FINDINGS

Almost all brand name prescription drugs are considerably more expensive in the U.S. than in other industrialized nations.

Medicaid State Agencies paid (including the Federal share) an estimated $474 million more for name brand drugs than would have been paid at the prices paid by Canadian prescription drug programs.

Canada's lower prices were attributable to negotiated price reductions between the drug manufacturers and provincial government.

Success in negotiating price reductions is dependent on an ability to restrict the payments for certain high cost drugs in cases where lower cost alternatives exist.

The negotiation efforts of State Medicaid Agencies would be enhanced through Federal efforts to monitor and provide international drug pricing information.

The Medicaid prescription drug costs per recipient, in 1988, were 22 percent lower in the five largest states with restricted drug lists.

Implementing restricted drug lists in the 29 non-restricted states could result in estimated annual savings (Federal and State) of $226 million per year.

RECOMMENDATIONS

The Health Care Financing Administration (HCFA) should reduce its financial participation in Medicaid prescription drug costs by $261 million per year. This can be achieved by proposing legislation that permits one or more of the following approaches:

1. Establish State specific cost reduction targets based on the comparison of individual State drug prices with national and international drug price data. This legislation should include an ability to reduce federal financial participation (FFP) for States who fail to achieve these targets.

2. Set specific drug price limits for brand name drugs similar to those in place for multi-source drugs.

3. Negotiate directly with drug manufacturers for prescription drug discounts and rebates.

The intention of our recommendation is to reduce Medicaid drug expenditures by $474 million, the amount which could be saved if Medicaid State agencies obtained brand name drugs at the Canadian prices. Of this amount, an estimated $261 million would be FFP savings and $213 million would be State savings.

It should be noted that OBRA '90 included provisions that involve the HCFA in gathering and monitoring drug price data and negotiating rebate agreements with drug manufacturers on behalf of the States. The Congressional Budget Office estimated total savings to be $3.3 billion over 5 years.

COMMENTS

Comments on the draft report were received from the HCFA and the Assistant Secretary for Planning and Education (ASPE). ASPE had several technical comments which we considered in preparing our final report. The HCFA generally agreed with the recommendations, the amount

of savings, and noted that OBRA '90 contains provisions that partially support the OIG recommendations.

The HCFA did not respond to our recommendation regarding the creation of restrictive drug lists. We believe that this recommendation should be pursued as it could lead to annual savings of at least $226 million.

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INTRODUCTION

BACKGROUND

The decade of the 1980's was marked by rapid escalation in spending for medical care. Expenditures for health care in the U.S. has doubled since the beginning of this decade. Costs and expenditures for prescription medicines are one of the fastest growing components of this increase. According to the U.S. Bureau of Labor Statistics, the price of prescription drugs increased 149 percent over the past decade while the general price inflation was only 53 percent. This has occurred while drug manufacturing, as an industry, has enjoyed being one of the nations most profitable industries. According to the U.S. Department of Commerce statistics for the decade of the 1980's, pretax profits for pharmaceutical manufacturing firms averaged 17.55 percent of sales compared with 6.77 percent for all manufacturing industries (see appendices, Chart 1).

Federal and State Medicaid policy makers have viewed drug price increases with great concern. Medicaid now pays more than $3.6 billion per year for prescription drugs, an amount that exceeds payments for physician services. Because of these high costs the Senate Special Committee on Aging asked us to prepare this report. Many Medicaid State Agencies have embarked on strategies to limit their drug outlays. Twenty-one States have developed restricted drug lists to limit their outlays for certain high cost drugs. Such restricted drug lists are not limited to Medicaid programs. A 1989 Special Committee on Aging report stated that large hospital buying groups base their contract purchases on multi-hospital formularies. The report also stated that HMOs are particularly successful in using a therapeutic formulary. In addition, some States have begun to negotiate with drug manufacturers to obtain discounts or rebates on prescription drugs. Many manufacturers have required open formularies as a condition for receiving discounts and rebates.

This report evaluates strategies currently used by State Medicaid Agencies and Canadian provinces in reducing their drug costs and proposes a series of actions to prevent unnecessary payments for prescription drugs.

METHODOLOGY

This study had a three-phased approach. Phase one analyzed and compared existing data from the U.S., Canada and the nations which comprise European Economic Community. The second phase consisted of interviews with representatives from: (1) the Canadian government, (2) respondents from selected trade associations in both Canada and the U.S., and (3) representatives from selected Medicaid State Agencies. These interviews explored the components of pricing and the perceived reasons for the price differences. In part three, we compared the Medicaid drug expenditures of five States which maintain restricted drug lists to five States which do not have such restrictions.

In phase one, information for the U.S. was obtained from the First Data Bank: Drug Information Data. For the purpose of analysis the Blue Book Average Wholesale Unit Price was used as an indicator of consumer retail prices. This is the average wholesale price (AWP) based upon actual surveys of wholesalers. Data from the March 1989 tape were analyzed. Actual State Medicaid utilization data were obtained for the States. This analysis, contained in Table 2 (see appendices) was based on data obtained from Market Measures Incorporated, West Orange, New Jersey.

Information for Canada was obtained from Quebec's *List of Medications* and Ontario's *Drug Benefit Formulary*. Both are dated January 1989. Quebec uses the prices as listed while Ontario's system is based on the best available price. This is the lowest amount, calculated per gram, milliliter, tablet, capsule or other unit, for which a listed drug product can be purchased in Canada for wholesale or retail sale in Ontario. For the purposes of this report the best available price was used in calculating Ontario's prices. All prices (Canadian and U.S.) are product prices and do not include dispensing fees which are roughly equivalent. Prices were compared using the name, equivalent dosage, quantity of medication and, where possible, the manufacturer.

We secured information from 10 Medicaid State Agencies with high expenditures: New York, Illinois, Michigan, Ohio, California, Pennsylvania, Texas, Florida, Massachusetts, and Indiana. Through our contacts with State officials, we determined which States maintained open lists. We compared a weighted average of the drug costs per beneficiary of the five largest States with restricted drug lists to the weighted average of the five largest States without restricted drug lists.

The Canadian prescription drug prices were calculated using the dollar conversion rate of .8324. This was the rate on March 1, 1989.

Limitations of the Approach

Analysis of this nature has inherent difficulties. Comparisons could only be made in cases where packaging and dosage strength were the same. We started with the 100 most frequently prescribed drugs in the U.S. but could only find 48 direct matches with the Canadian price lists. The timeframes for the comparison shown on Table 1 are within the first quarter of 1989. The usage data, which we obtained for five States which account for about 42 percent of the total Medicaid drug expenditures, was not available for the same quarter but we used the most recent available, which ranged from 1988 for New York to March 1990 for California. For Table 2, we were only able to match exact dosages on 17 of the 48 drugs shown on Table 1; however these accounted for about 10 percent of total expenditures

We would also note that differences in wholesale and retail margins, method of reimbursement, range of beneficiaries as well as cultural and demographic variation create differences in pricing and use of prescribed medication. The difference in the two health care systems coupled with the impact of the new patent law, mandatory utilization of generic (formulary) in Canada and the Fair Trade Agreement may also enhance the noted differences in the prices. Simply stated, it is unlikely that these 48 compared drugs are used as frequently in Canada as they are in the U.S. We would also note that we were unable to obtain consumer retail prices for Canada. Our price comparisons, while illustrative of differences between public drug programs in the U.S. and Canada, may not be precise measures of actual differences in consumer retail prices. Finally,

differences in the drug utilization characteristics of States due to demographic differences may impact the reliability of our comparison concerning the effect of restrictive drug lists on Medicaid outlays.

FINDINGS

Almost All Brand Name Prescription Drugs Are Considerably More Expensive In The U.S. Than In Other Industrialized Nations

For the 48 individual drugs analyzed (see appendices, Table 1) the U.S. Blue Book prices were on the average 62 percent higher (from a low of 6.65 to a high of 233.18 percent) in the U.S. than the average of the prices determined for the two provinces (Quebec and Ontario) of Canada. Only two drugs were found to be less expensive in the U.S.: Trental (pentoxifylline) and Eryc (erythromycin). In a report issued in 1989, the Senate Special Committee on Aging, stated that Americans spend more for prescription drugs than the citizens of any nation (except the Netherlands) in the European Economic Community (EEC) (see appendices, Chart 2). Average drug prices paid by American consumers are even higher than drug prices paid in EEC nations that do not regulate prescription drug prices, and 54 percent higher than the average for EEC nations.

Medicaid State Agencies Paid An Estimated $474 Million More For Name Brand Drugs Than Would Have Been Paid At The Prices Paid By Canadian Prescription Drug Programs.

The findings from the utilization data in the top five States for Medicaid drug expenditures (see appendices, Table 2) show the estimated Medicaid savings that could accrue if the Canadian prices were paid. On just the seventeen direct matches, with no extrapolation, annual savings would be $46 million. If similar price differences exist on all other brand name drugs, total Medicaid savings are estimated at $474 million per year.

Canada's Lower Prices Were Attributable To Negotiated Price Reductions Between Drug Manufacturers And The Provincial Government.

Our interviews with Canadian officials indicated that lower prices in Canada were attributable to the authorities and negotiating efforts of the Provincial governments. These officials noted that Canada ties the License to Market for new drugs in Canada to a negotiated price settlement between the Provincial government and manufacturers. The failure to reach a price agreement can mean the refusal to grant a license to market. Typically, manufacturers must submit price information from seven nations. This information is used to arrive at a negotiated price arrangement. Canadian officials indicated that they seek price reductions of at least 25 percent below the amount paid in the U.S. for the same drug.

These officials also noted that the creation of the Patent Medicine Review board in Canada has restrained price increases. This pricing review board ties price increases to rises in the consumer price index. If the Board finds little justification for a price increase, it can remove the patent protection for the drug. In determining prices this Board may compare the costs both nationally and internationally (up to 7 countries including the U.S.) for therapeutically equivalent drugs. Some estimate that drug prices have been reduced up to 25 percent because of actions of the Patent Medicine Review Board.

We also interviewed representatives from the Pharmaceutical Manufacturers Association in the U.S. to solicit their perspectives on the drug price controls used in Canada. These representatives, while acknowledging the lower prices exist in Canada, stated that drug research and Food and Drug Administration approval costs add significant costs which are reflected in U.S. drug prices. These representatives believed that Canada was benefiting from research and development of drugs in the U.S. but was not compensating manufacturers for these costs within the price structure established in Canada.

Success In Negotiating Price Reductions Is Dependent On An Ability To Restrict The Payment For Certain High Cost Drugs In Cases Where Lower Cost Alternatives Exist.

Our interviews with Canadian officials indicated that they believed that establishing restricted drug lists was critically important in negotiating favorable drug price arrangements. As stated earlier, at the Federal level the License to Market in Canada is withheld on new drugs until a price settlement has been reached. At the Provincial level, the Provinces under study have established restricted drug lists as a means to limit outlays for certain drugs. Without such restricted drug lists, known in the U.S. as formularies, these officials believed their negotiating power would be diminished.

The Negotiation Efforts Of State Medicaid Agencies Would Be Enhanced Through Federal Efforts To Monitor And Provide International Drug Pricing Information.

The negotiation efforts of State Medicaid Agencies would be enhanced through Federal efforts to monitor and provide them with national and international drug pricing information. Our interviews with representatives from ten large Medicaid State Agencies disclosed that 8 out of the 10 have begun discussions with drug manufacturers aimed at obtaining discounts and rebates on their Medicaid drug purchases. The State of California has completed negotiated price arrangements with a drug manufacturer. Another State, Ohio, indicated that it is ready to sign agreement with two manufacturers. We determined that there are several international data bases that contain information on drug pricing. This information could be of great value to States in their negotiations. The Organization for Economic Cooperation and Development (OECD) has a Health Data File that facilitates the identification of trends in pricing and use. International comparisons of individual drug prices are available through the Belgian Consumer Association.

Contacts were also made within the U.S. Federal Government to determine if a single entity or organization is analyzing drug prices. We also checked to see if any governmental organization was assessing international drug prices. We found that no Federal component was assessing individual drug prices, comparing the differences in prices across States, examining types of purchasing arrangements (retail or wholesale) or assessing the prices in the U.S. with Canada or the European countries. Components within the Public Health Service do obtain and analyze the prices paid for medications, usually on a condition specific basis. Also cumulative price comparisons for prescribed and over the counter drugs are reported as part of the Consumer Price Index. The HCFA has recently published in the *Health Care Financing Review 1989 Supplement* an international comparison of health care financing and delivery: data and perspectives. This contains the OECD Health Data file compendium including trends in drug pricing.

The Medicaid Prescription Drug Costs Per Recipient, In 1988, Were 22 Percent Lower In The Five Largest States With Restricted Drug Lists

We determined that the five largest States which maintain restricted drug lists (California, New York, Ohio, Illinois, and Michigan) had a Medicaid prescription drug cost per recipient of $203.05 for 1988. The drug cost of the five largest States without restricted drug lists (Pennsylvania, Texas, Florida, Massachusetts, and Indiana) was $247.42 per recipient. This 22 percent difference indicates that the five largest States saved $272 million in 1988 through the maintenance of their restricted drug list.

We conducted a further analysis of the 25 States with highest total Medicaid drug payments. These 25 States comprise 87 percent of the total 1988 Medicaid drug outlays. We found 8 of these 25 States have drug costs of less than $200 per recipient and 7 of these 8 States maintain a restricted drug list. If all 21 State agencies which maintain restrictive drug lists achieved similar savings, then the total 1988 Medicaid savings due to restrictive drug lists totals $443 million.

Implementing Restricted Drug Lists In The 29 Non-Restricted States Could Result In Estimated Savings Of $226 Million Per Year.

We estimate that the 29 Medicaid State Agencies that do not currently maintain restrictive drug lists would achieve annual savings of $226 million if restrictions were applied on the same basis as the five largest States which maintain restricted drug lists.

RECOMMENDATIONS

The HCFA Should Reduce Its Financial Participation In Medicaid Prescription Drug Costs By $261 Million Per Year. This Can Be Achieved By Proposing Legislation That Permits One Or More Of The Following Approaches:

1. Establish State specific cost reduction targets based on the comparison of individual State drug prices with national and international drug price data. This legislation should include an ability to reduce Federal Financial Participation (FFP) for States who exceed these targets.

   In establishing State reduction targets, HCFA should take into account actual drug price differences as well as differences in drug utilization patterns. We also suggest that HCFA enhance the ability of State Medicaid Agencies to negotiate lower prescription drug prices by providing them with national and international drug price information.

   At the State level, these price reduction targets can be achieved through one or a combination of the following:

   - the creation or expansion of restrictive drug lists,
   - State negotiations with drug manufacturers, or
   - formulation of multi-State buying groups to negotiate discounts and rebates on their drug purchases.

2. Set specific drug price limits for brand name drugs similar to those in place for multi-source drugs.

   Price limits established by HCFA in 1987 for multi-source drugs have proven effective in limiting drugs outlays for multi-source drugs. We suggest imposing similar limits for brand-name drugs. A determination of upper limit prices could be based on the best available U.S. prices or other national or international drug price data.

3. Negotiate directly with drug manufacturers for prescription drug discounts and rebates.

   The HCFA could commence national Medicaid negotiations to arrive at either a system of rebates and discounts or to arrive at a price limit for brand name drugs.

   The intention of our recommendation is to reduce Medicaid drug expenditures by $474 million the amount which could be saved if Medicaid State agencies obtained brand name drugs at the Canadian prices. Of this amount, an estimated $261 million would be FFP savings and $213 million would be State savings.

COMMENTS

The HCFA agrees that the Medicaid program should pay less for prescription drugs and notes that OBRA '90 contains provisions that partially support our recommendations. The two provisions that tie into our recommendations are Set specific drug price limits similar to those in place for multiple source drugs and Negotiate with drug manufacturers for discount and rebates."

It should be noted that OBRA '90 included provisions that involve the HCFA in gathering and monitoring drug price data and negotiating rebate agreements with drug manufacurers on behalf of the States. The Congressional Budget Office estimated total savings to be $3.3 billion over 5 years.

We note that HCFA does not comment on our recommendation for the creation of restrictive drug lists. We believe that this recommendation should be pursued further by the HCFA as it could lead to annual savings of at least $226 million by itself.

APPENDIX A

AGENCY COMMENTS

Mangano/Grob EXTRA
Cameron
Braun
Stuley

DEPARTMENT OF HEALTH & HUMAN SERVICES

Health Care
Financing Administration

Memorandum

Date DEC 17 1990

From Gail R. Wilensky, Ph.D.
Administrator

Subject OIG Draft Report - Strategies to Reduce Medicaid Drug Expenditures (OEI-12-90-00800)

To The Inspector General
Office of the Secretary

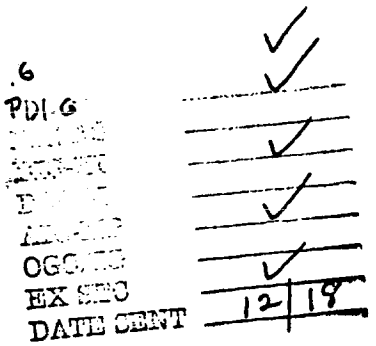
We have reviewed the subject report which evaluates strategies currently used by States in reducing their Medicaid drug costs and proposes actions to prevent unnecessary payments for prescription drugs.

The OIG recommends that HCFA reduce its financial participation in Medicaid prescription drug costs by $261 million per year. To accomplish this, OIG recommends that HCFA propose legislation to achieve one or more of several legislative approaches outlined by OIG.

We agree with OIG's position that the Medicaid program should pay less for prescription drugs than it is now paying. We note that the recently passed Omnibus Budget Reconciliation Act of 1990 contains provisions that partially support at least two of the legislative options suggested by the report's recommendation. Comments on the recommendation and the report in general are attached.

We appreciate OIG's work on Medicaid prescription drug payment and thank you for the opportunity to review and comment on this draft report. Please advise us whether you agree with our position on the report's recommendation at your earliest convenience.

Attachment



Comments of the Health Care Financing Administration
on the OIG Draft Report: Strategies to Reduce
Medicaid Drug Expenditures
(OEI-12-90-00800)

Recommendation

The Health Care Financing Administration (HCFA) should reduce its financial participation in Medicaid prescription drug costs by $261 million per year. This can be achieved by proposing legislation that permits one or more of the following approaches:

1. Establish State specific cost reduction targets based on the comparison of individual State drug prices with national and international drug price data. This legislation should include an ability to reduce Federal financial participation (FFP) for States who fail to achieve these targets.

2. Set specific drug price limits for brand name drugs similar to those in place for multi-source drugs.

3. Negotiate with drug manufacturers for prescription drug discounts and rebates.

The intention of our recommendation is to reduce Medicaid drug expenditures by $474 million, the amount which could be saved if Medicaid State agencies obtained brand name drugs at the Canadian prices. Of this amount, an estimated $261 million would be FFP savings and $213 million would be State savings.

HCFA Response

We agree that the Medicaid program should pay less for prescription drugs. The recently passed Omnibus Budget Reconciliation Act of 1990 (OBRA '90) included a major revision which addresses a reduction in the amount the Medicaid program will ultimately pay for most prescription drugs.
The OBRA '90 provisions partially support at least two of OIG's legislative recommendations (i.e., "Set specific drug price limits for brand name drugs similar to those in place for multi-source drugs" and "Negotiate with drug manufacturers for prescription drug discounts and rebates.")

The OBRA '90 approach will force drug manufacturers to give the Medicaid program the benefit of discounts similar to those enjoyed by a variety of others.

We believe this approach can be effective. Drug manufacturers have already begun on their own to negotiate price deals with various State Medicaid programs. HCFA actuarial cost estimates of the drug provisions of the recently passed reconciliation bill cause us to agree that a $474 million reduction ($261 million reduction in Federal financial participation) for Medicaid prescription drug costs is achievable.

We believe any further proposals to address prescription drugs must be considered with a view toward seeking to balance cost savings with appropriate Federal/State roles, access to medically necessary drugs for Medicaid recipients, adequate payment for pharmacists' services, and protection of the physician/patient relationship.

General comments

- The enormous differences between U.S. and Canadian systems for the purchase of prescription drugs for our respective government health programs preclude the use of Canadian comparisons as a basis for U.S. drug savings estimates. Canada has a national health insurance program which allows the Canadian government to buy drugs directly from the manufacturer and negotiate prices for those drugs. Further, the Canadian government has the authority to determine whether or not a drug will be marketed in Canada and at what price. Certain negotiating tools used by the Canadians would require legislation and might face strong opposition in this country. Such negotiating tools include: (1) tieing the "license to market" for new drugs to a negotiated price settlement between the Federal government and manufacturers and; (2) the ability of Canada's Patent Medicine Review Board to remove patent protection for drugs whose prices increase with little justification.

- An unknown amount of the Canadian savings were obtained because "Canada was benefitting from research and development of drugs in the U.S. but was not compensating manufacturers for these costs within the price structure established in Canada." We believe that R&D costs ought to be fairly compensated as a part of payment; therefore, "compensating manufacturers for these costs" would somewhat limit the savings that could be achieved in the U.S. if additional legislation is passed.

PHARMACEUTICAL VS. ALL MANUFACTURERS

PRE-TAX PROFITS AS % OF SALES

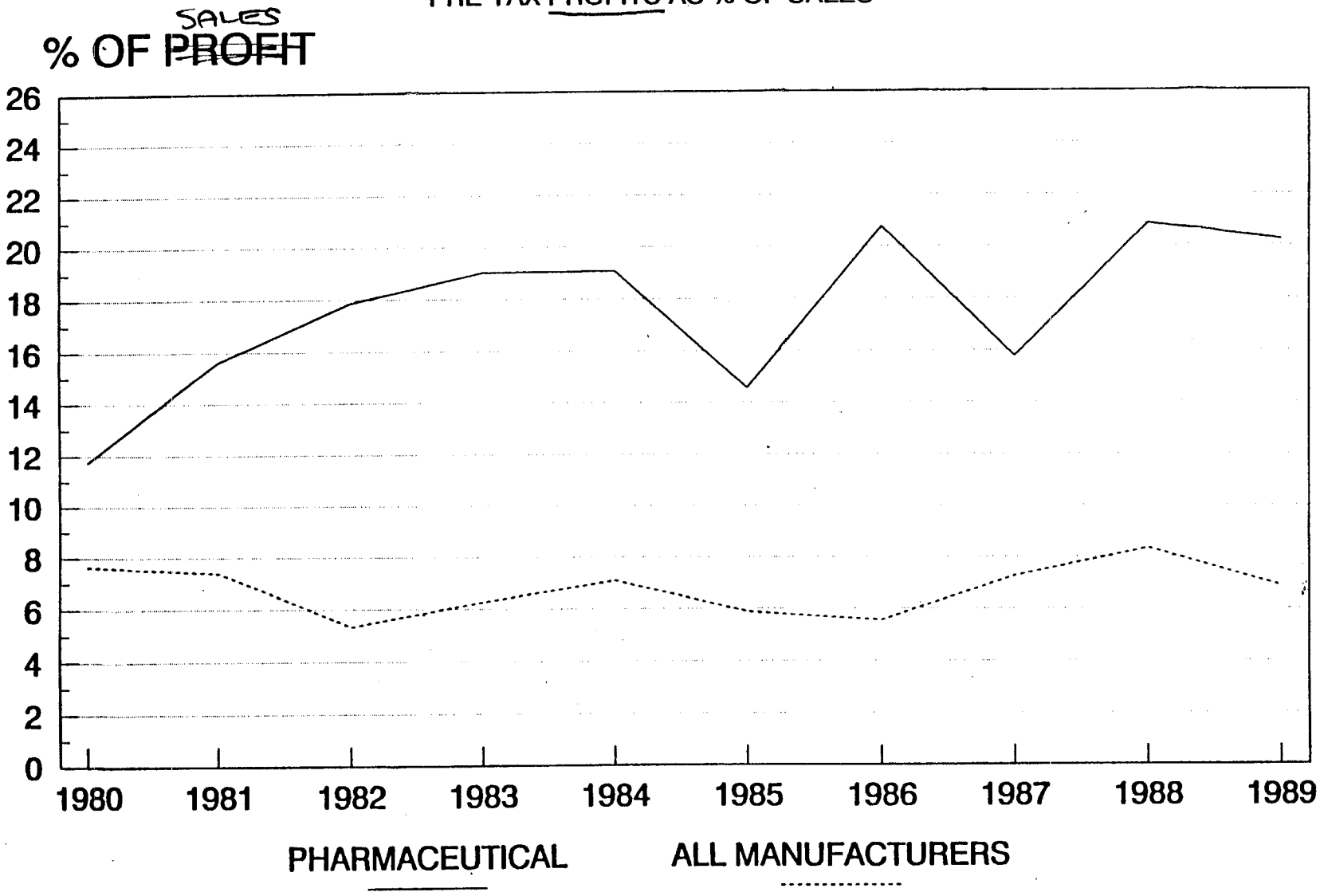


CHART 1

U.S. vs. EUROPEAN ECONOMIC COMMUNITY PRESCRIPTION DRUG PRICES

(25 Identical Drug Products, 1988)

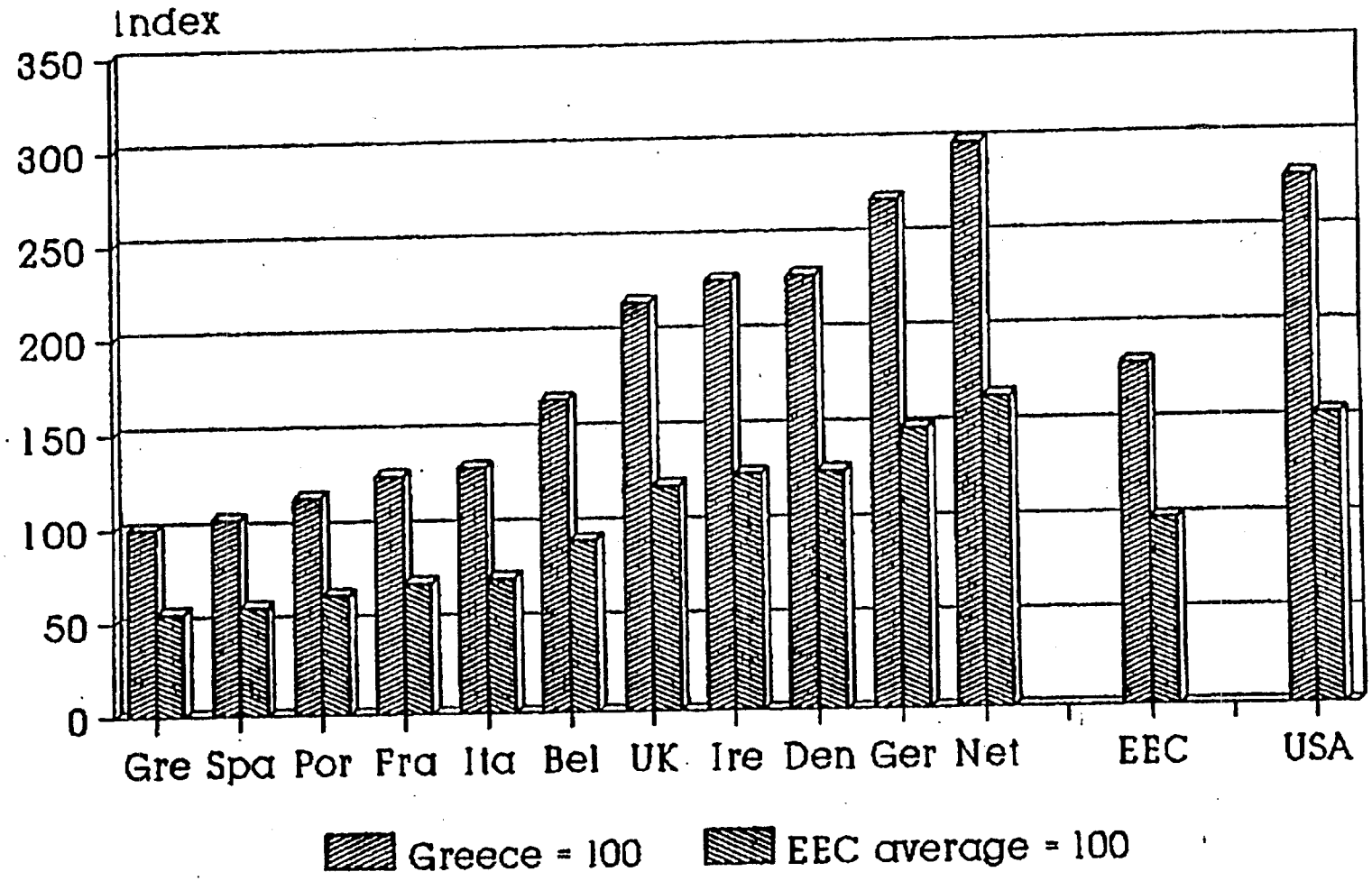


CHART 2

TABLE 1

RETAIL PRICE COMPARISON

DRUG	DOSAGE	SIZE	U.S. BLUE BOOK PRICE	CANADA (CANADIAN DOLLARS) QUEBEC	ONTARIO	CANADIAN AVERAGE	CANADIAN AVERAGE IN U.S. DOLLARS	% DIFFERENCE U.S. PRICE & CANADIAN AVERAGE
AMOXIL	250 MG	100	$21.07	$17.67	$17.07	$17.37	$14.46	45.72%
LANOXIN	.25 MG	100	$7.91	$8.56	$7.05	$7.81	$6.50	21.75%
XANAX	.5 MG	100	$44.65	$16.90	$17.48	$17.19	$14.31	212.04%
ZANTAC	150 MG	60	$73.63	$61.29	$56.22	$58.76	$48.91	50.55%
PREMARIN	1.25MG	21	$6.96	$3.50	$3.66	$3.58	$2.98	133.56%
TENORMIN	100 MG	100	$88.54	$88.57	$81.25	$84.91	$70.68	25.27%
CARDIZEM	30 MG	100	$29.38	$32.98	$30.30	$31.64	$26.34	11.55%
TYLENOL/CODEINE	30 300	100	$12.08	$9.86	$3.55	$6.71	$5.58	116.44%
SYNTHROID	.025MG	100	$10.31	$4.64	$4.30	$4.47	$3.72	177.09%
CECLOR	250 MG	15	$21.96	$14.44	$13.25	$13.85	$11.52	90.55%
HALCION	.25 MG	100	$42.66	$18.32	$16.79	$17.56	$14.61	191.94%
VASOTEC	5 MG	100	$68.15	$74.52	$68.36	$71.44	$59.47	14.60%
ORTHO-NOVUM	1/50	21	$11.53	$10.85	$8.79	$9.82	$8.17	41.05%
LASIX	40 MG	100	$13.35	$9.86	$9.03	$9.45	$7.86	69.80%
THEO-DUR	200 MG	100	$18.00	$21.15	$19.40	$20.28	$16.88	6.65%
ORTHO NOVUM	7-7-7	28	$16.60	$9.76	$8.94	$9.35	$7.78	113.29%
LOPRESSOR	100 MG	100	$55.71	$40.72	$32.86	$36.79	$30.62	81.92%
VENTOLIN	4 MG	100	$34.93	$21.77	$15.62	$18.70	$15.56	124.46%
DIALANTIN	100 MG	100	$13.55	$5.32	$4.76	$5.04	$4.20	222.98%
FELDENE	10 MG	100	$99.25	$73.58	$73.37	$73.48	$61.16	62.28%
VALIUM	10 MG	60	$24.84	$12.68	$7.39	$10.04	$8.35	197.37%
MICRO-K	8 MEQ	100	$10.05	$10.39	$9.53	$9.96	$8.29	21.22%
PEDIAMYCIN	200 MG	100	$5.93	$8.74	$5.52	$7.13	$5.94	-0.08%
PROVERA	10 MG	100	$43.25	$46.98	$43.10	$45.04	$37.49	15.36%
FLEXERIL	10 MG	100	$76.53	$52.90	$47.73	$50.32	$41.88	82.73%
CLINORIL	150 MG	100	$75.66	$53.00	$48.62	$50.81	$42.29	78.89%
MINIPRESS	2 MG	100	$42.63	$32.36	$32.26	$32.31	$26.89	58.51%
ERYC	250 MG	100	$25.28	$41.64	$36.93	$39.29	$32.70	-22.69%
TIMOPTIC	.25 PC	15	$31.05	$31.97	$21.86	$26.92	$22.40	38.59%
COUMADIN	2.5 MG	100	$26.76	$20.89	$19.16	$20.03	$16.67	60.54%
ATIVAN	1 MG	100	$48.96	$10.14	$7.10	$8.62	$7.18	582.34%
NITROSTAT	.6 MG	100	$3.08	$2.80	$2.18	$2.49	$2.07	48.60%
DIABETA	5 MG	30	$10.00	$5.15	$4.72	$4.94	$4.11	143.43%
CORGARD	40 MG	100	$63.80	$38.60	$39.35	$38.98	$32.44	96.65%
MEVACOR	20 MG	60	$93.75	$94.83	$87.00	$90.92	$75.68	23.88%
KEFLEX	500 MG	30	$55.26	$26.31	$13.54	$19.93	$16.59	233.18%
TRANXENE	3.75MG	50	$16.15	$10.63	$7.58	$9.11	$7.58	113.09%
LOPID	300 MG	100	$37.13	$42.44	$39.49	$40.97	$34.10	8.89%
DURICEF	500 MG	30	$43.98	$34.34	$31.50	$32.92	$27.40	60.50%
TRENTAL	400 MG	60	$20.67	$35.86	$32.90	$34.38	$28.62	-27.77%
TEGRETOL	200 MG	100	$29.25	$26.86	$20.26	$23.56	$19.61	49.15%
ALDOMET	250 MG	100	$27.54	$17.18	$14.12	$15.65	$13.03	111.41%
DEMULEN 1/50	1/50	28	$16.83	$12.84	$11.78	$12.31	$10.25	64.25%
NORINYL	1/50	21	$9.90	$10.02	$9.19	$9.61	$8.00	23.82%
PREDNISONE	5 MG	30	$1.62	$1.23	$0.30	$0.77	$0.64	154.40%
MACRODANTIN	50 MG	60	$29.81	$19.82	$17.01	$18.42	$15.33	94.50%
INDOCIN	50 MG	30	$37.35	$29.46	$9.10	$19.28	$16.05	132.73%
RESTORIL	15 MG	100	$37.50	$16.10	$15.64	$15.87	$13.21	183.87%
TOTAL			$1,634.78				$1,006.09	62.49%

TABLE 2

BRAND-NAME DRUGS: MEDICAID COST COMPARISON

A	B	C	D	E	F	G	H	I	J	K
DRUG	DOSAGE	CANADIAN NUMBER DISPENSED	STATE	AVERAGE NUMBER OF Rx PER MONTH	AVERAGE NUMBER DISPENSED	COST PER Rx	STANDARDIZED COST ((C/F)*G)	CANADIAN AVERAGE COST IN U.S. $	YEARLY EXPENDITURE (E*G*12)	ANNUAL SAVINGS (((H-I)*E*12) *F/C)
CARDIZEM	30 MG	100	CA	10,393	103	$33.07	$32.11	$26.34	$4,124,358	$741,156
		100	MI	2,329	90	$26.54	$29.49	$26.34	$741,740	$79,277
		100	NY	6,346	95	$27.75	$29.21	$26.34	$2,113,218	$207,874
		100	OH	2,631	92	$28.48	$30.96	$26.34	$899,171	$134,176
		100	PA	3,649	88	$28.37	$32.24	$26.34	$1,242,266	$227,405
CECLOR	250 MG	15	CA	7,931	35	$46.53	$19.94	$11.52	$4,428,353	$1,869,113
		15	MI	3,004	28	$37.20	$19.93	$11.52	$1,340,986	$565,501
		15	NY	9,311	26	$33.65	$19.41	$11.52	$3,759,782	$1,527,831
		15	OH	4,465	25	$35.57	$21.34	$11.52	$1,905,841	$876,696
		15	PA	4,030	27	$39.16	$21.76	$11.52	$1,893,778	$890,586
CLINORIL	150 MG	100	CA	1,975	65	$46.76	$71.94	$42.29	$1,108,212	$456,669
		100	MI	626	54	$40.46	$74.93	$42.29	$303,936	$132,370
		100	NY	3,061	46	$33.48	$72.78	$42.29	$1,229,787	$515,153
		100	OH	1,006	54	$38.41	$71.13	$42.29	$463,686	$187,974
		100	PA	1,039	51	$43.48	$85.25	$42.29	$542,109	$273,173
CORGARD	40 MG	100	CA	733	65	$40.95	$63.00	$32.44	$360,196	$174,708
		100	MI	464	34	$21.34	$62.76	$32.44	$118,821	$57,403
		100	NY	2,007	35	$19.90	$56.86	$32.44	$479,272	$205,798
		100	OH	573	36	$21.17	$58.81	$32.44	$145,565	$65,257
		100	PA	600	39	$27.27	$69.92	$32.44	$196,344	$105,245
DIABETA	5 MG	30	CA	6,584	98	$37.75	$11.56	$4.11	$2,982,552	$1,922,334
		30	MI	1,361	63	$20.84	$9.92	$4.11	$340,359	$199,470
		30	NY	3,533	65	$20.08	$9.27	$4.11	$851,312	$473,969
		30	OH	2,631	67	$23.20	$10.39	$4.11	$732,470	$442,820
		30	PA	2,011	66	$25.29	$11.50	$4.11	$610,298	$392,209
DILANTIN	100 MG	100	CA	15,011	114	$12.63	$11.08	$4.20	$2,275,067	$1,413,561
		100	MI	8,181	91	$11.30	$12.42	$4.20	$1,109,344	$734,550
		100	NY	10,871	95	$9.71	$10.22	$4.20	$1,266,689	$746,768
		100	OH	9,385	93	$12.66	$13.61	$4.20	$1,425,769	$986,368
		100	PA	10,842	93	$11.55	$12.42	$4.20	$1,502,701	$995,084
HALCION	.25 MG	100	CA	13,524	15	$9.16	$61.07	$14.61	$1,486,558	$1,130,836
		100	MI	2,571	28	$14.05	$50.18	$14.61	$433,471	$307,237
		100	NY	6,739	28	$12.51	$44.68	$14.61	$1,011,659	$680,781
		100	OH	4,015	27	$12.83	$47.52	$14.61	$618,149	$428,058
		100	PA	4,320	30	$15.28	$50.93	$14.61	$792,115	$564,857
LANOXIN	.25 MG	100	CA	12,126	77	$7.86	$10.21	$6.50	$1,143,724	$415,786
		100	MI	5,340	30	$4.56	$15.20	$6.50	$292,205	$167,309
		100	NY	9,395	34	$4.68	$13.76	$6.50	$527,623	$278,587
		100	OH	6,749	32	$4.89	$15.28	$6.50	$396,031	$227,657
		100	PA	6,531	35	$4.34	$12.40	$6.50	$340,134	$161,924
LOPID	300 MG	100	CA	485	109	$39.51	$36.25	$34.10	$229,948	$13,629
		100	MI	721	88	$33.25	$37.78	$34.10	$287,679	$28,055
		100	NY	3,015	89	$33.21	$37.31	$34.10	$1,201,538	$103,535
		100	OH	833	84	$32.87	$39.13	$34.10	$328,569	$42,249
		100	PA	742	78	$32.61	$41.81	$34.10	$290,359	$53,536
LOPRESSOR	100 MG	100	CA	2,930	73	$43.84	$60.05	$30.62	$1,541,414	$755,394
		100	MI	685	47	$25.85	$55.00	$30.62	$212,487	$94,174
		100	NY	2,971	49	$26.23	$53.53	$30.62	$935,152	$400,167
		100	OH	653	51	$28.98	$56.82	$30.62	$227,087	$104,703
		100	PA	875	52	$31.48	$60.54	$30.62	$330,540	$163,333
ORTHO NOVUM	7-7-7	28	CA	8,803	86	$50.08	$16.31	$7.78	$5,290,251	$2,765,049
		28	MI	6,810	28	$17.26	$17.26	$7.78	$1,410,487	$774,465
		28	NY	6,288	28	$21.57	$21.57	$7.78	$1,627,586	$1,040,316
		28	OH	6,467	31	$18.00	$16.26	$7.78	$1,396,872	$728,172
		28	PA	3,970	33	$20.20	$17.14	$7.78	$962,328	$525,338
TEGRETOL	200 MG	100	CA	2,767	147	$22.78	$15.50	$19.61	$756,387	($200,840)
		100	MI	3,055	126	$32.41	$25.72	$19.61	$1,188,151	$282,271
		100	NY	3,489	125	$35.29	$28.23	$19.61	$1,477,522	$451,162
		100	OH	3,753	113	$32.99	$29.19	$19.61	$1,485,738	$487,703
		100	PA	3,804	119	$37.06	$31.14	$19.61	$1,691,715	$626,405
TENORMIN	100 MG	100	CA	1,461	62	$59.44	$95.87	$70.68	$1,042,102	$273,832
		100	MI	540	31	$28.39	$91.58	$70.68	$183,967	$41,987
		100	NY	1,909	34	$27.73	$81.56	$70.68	$635,239	$84,739
		100	OH	600	35	$33.24	$94.97	$70.68	$239,328	$61,217
		100	PA	644	37	$37.14	$100.38	$70.68	$287,018	$84,921

TABLE 2

BRAND-NAME DRUGS: MEDICAID COST COMPARISON

A	B	C	D	E	F	G	H	I	J	K
DRUG	DOSAGE	CANADIAN NUMBER DISPENSED	STATE	AVERAGE NUMBER OF Rx PER MONTH	AVERAGE NUMBER DISPENSED	COST PER Rx	STANDARDIZED COST ((C/F)*G)	CANADIAN AVERAGE COST IN U.S. $	YEARLY EXPENDITURE (E*G*12)	ANNUAL SAVINGS (((H-I)*E*12) *F/C)
THEO-DUR	200 MG	100	CA	4,553	89	$18.63	$20.93	$16.88	$1,017,869	$197,211
		100	MI	1,452	73	$12.41	$17.00	$16.88	$216,232	$1,566
		100	NY	4,924	60	$12.02	$20.03	$16.88	$710,238	$111,904
		100	OH	2,113	71	$14.30	$20.14	$16.88	$362,591	$58,760
		100	PA	1,887	71	$14.84	$20.90	$16.88	$336,037	~~$64,703~~
TRENTAL	400 MG	60	CA	983	100	$39.84	$23.90	$28.62	$469,953	($92,676)
		60	MI	3,397	81	$29.41	$21.79	$28.62	$1,198,869	($376,015)
		60	NY	4,709	79	$27.85	$21.15	$28.62	$1,573,748	($555,488)
		60	OH	3,459	84	$32.19	$22.99	$28.62	$1,336,143	($326,879)
		60	PA	3,665	81	$32.53	$24.10	$28.62	$1,430,669	($268,462)
VASOTEC	5 MG	100	CA	9,637	62	$37.92	$61.16	$59.47	$4,385,220	$121,504
		100	MI	2,271	36	$25.13	$69.81	$59.47	$684,843	$101,432
		100	NY	4,558	39	$26.59	$68.18	$59.47	$1,454,367	$185,857
		100	OH	2,646	37	$24.13	$65.22	$59.47	$766,176	$67,547
		100	PA	3,680	42	$31.04	$73.90	$59.47	$1,370,726	$267,786
ZANTAC	150 MG	60	CA	278	62	$77.13	$74.64	$48.91	$257,306	$88,711
		60	MI	9,679	48	$53.60	$67.00	$48.91	$6,225,533	$1,681,111
		60	NY	45,226	38	$44.06	$69.57	$48.91	$23,911,891	$7,101,467
		60	OH	15,877	47	$56.38	$71.97	$48.91	$10,741,743	$3,442,578
		60	PA	15,600	52	$57.95	$66.87	$48.91	$10,848,240	$2,913,461
									$142,093,505	$46,535,123

DATA SOURCES

A,B,C,I - FORMULARIES FOR PROVINCES OF ONTARIO & QUEBEC; PRICES AVERAGED
D,E,F,G - MARKET MEASURES, INC., WEST ORANGE, NJ, MEDICAID DRUG UTILIZATION REPORT, JULY 1990