

**Bulk Pharmaceutical
Purchasing as a
Cost Containment
Strategy—
The M.I.T. Study.**

Executive Summary

New York Health Products Council Forum
March 7, 2001

NEW YORK
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Introduction

On March 7, 2001, The New York Health Products Council hosted “Bulk Pharmaceutical Purchasing as a Cost Containment Strategy— The M.I.T. Study.” This presentation given by Stan Finkelstein, M.D. and Roy Epstein, Ph.D. was the eighth in a series of healthcare forums designed to provide information to those involved in the development of New York State’s healthcare delivery system.

Dr. Finkelstein is a Senior Research Scientist at the Sloan School of Management and Co-Director of the Program on the Pharmaceutical Industry at M.I.T. He has expertise in the field of health policy and management. Dr. Finkelstein earned his Bachelor of Science degree from M.I.T. and his medical degree from Harvard Medical School.

Dr. Epstein is Director of LECG, an international consulting firm based in Cambridge, Massachusetts. He specializes in applying econometrics, finance and microeconomics to problems involving complex business litigation and corporate strategy. Dr. Epstein is a Magna Cum Laude graduate of Wesleyan University and received his Ph.D. in economics from Yale University.

In the summer of 2000, Dr. Finkelstein and Dr. Epstein, along with Ernst Berndt, Ph.D. of the Sloan School of Management at M.I.T., were asked to conduct independent research to determine the economic impacts of bulk-buying statutes, and in particular the Section 271 Discount Drug Purchase Program of Massachusetts. Section 271 is an attempt to contain increasing expenditures on prescription medications by aggregating purchases with other State procurement.

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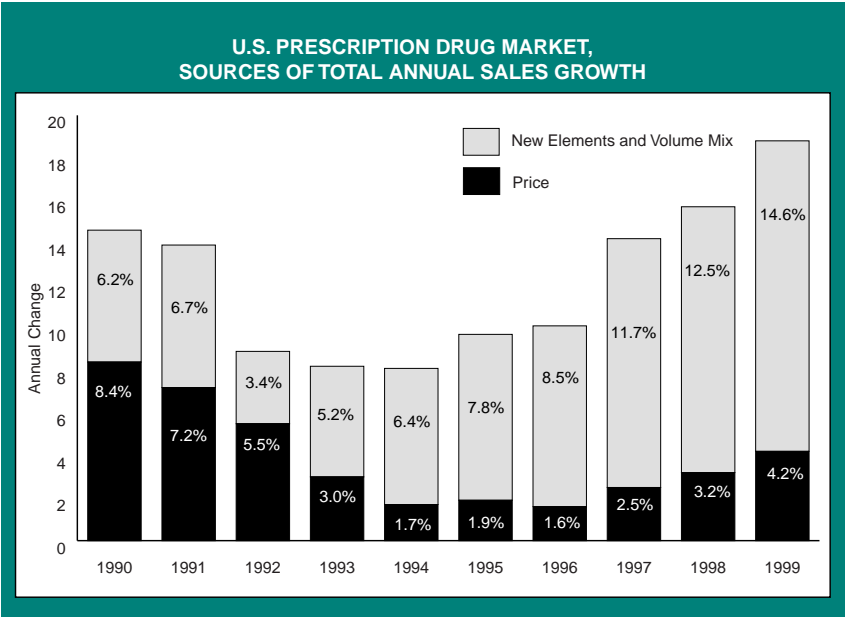


Price increases for pharmaceuticals are actually in line with inflation.

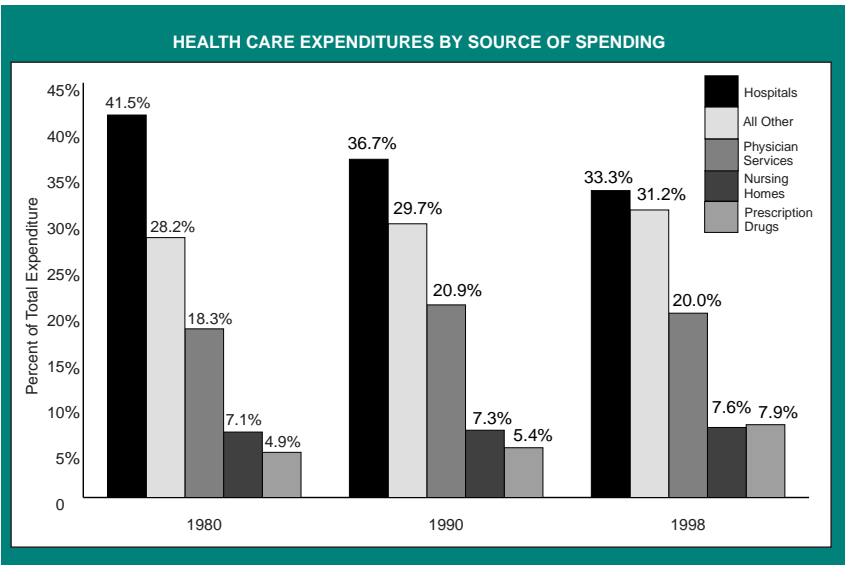
The reason the pharmaceutical industry has become the focus of increased attention is that the dollar volume of spending on prescription medications is rising. Spending is increasing approximately 15% to 18% per year. However, the reason for the increasing expenditure primarily has to do with higher utilization. There are simply more drugs being used to treat more people with a wider variety of medical conditions.

When looking at the total amount of spending growth, only a small part can be explained by pure price increases. The dominant reason for increased spending is due to the number of new treatments and increased usage. For typical brand name medications, prices are going up only slightly more than the inflation rate— 4%, whereas general inflation is about 3%. Once pharmaceuticals come on the market, it seems the annual price increases are fairly moderate relative to the inflation rate.

Prescription medications, as a fraction of total healthcare spending are about 8%. In comparison to physician services, or hospital services, the outlay for pharmaceuticals is a fairly small component. Expenditures on pharmaceuticals are going up, while hospitalizations are coming down, in part because drug therapies reduce the need for hospitalization.



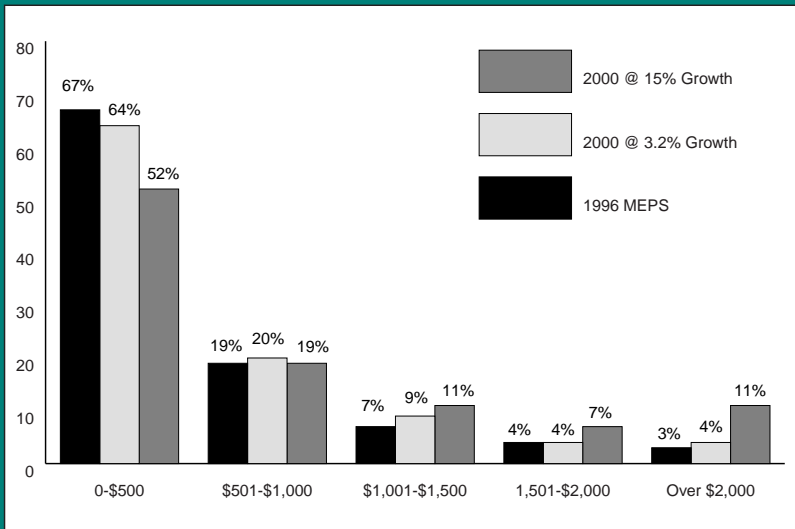
Source: The U.S. Pharmaceutical Industry: Why Such Growth in Times of Cost Containment? Berndt, E., MIT Sloan School of Management (Manuscript), August 2000, Figure 1.



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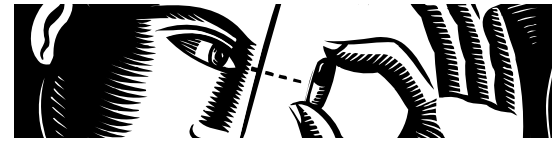
Note: Includes dental and other professional services, home health care, non-prescription drugs, and medical durables, vision products, net cost of private health insurance, government public health activities and research and construction.

DISTRIBUTION OF TOTAL EXPENDITURE ON PRESCRIPTION DRUGS BY MEDICARE INDIVIDUALS WITHOUT PRESCRIPTION DRUG INSURANCE 1996 AND ESTIMATED 2000



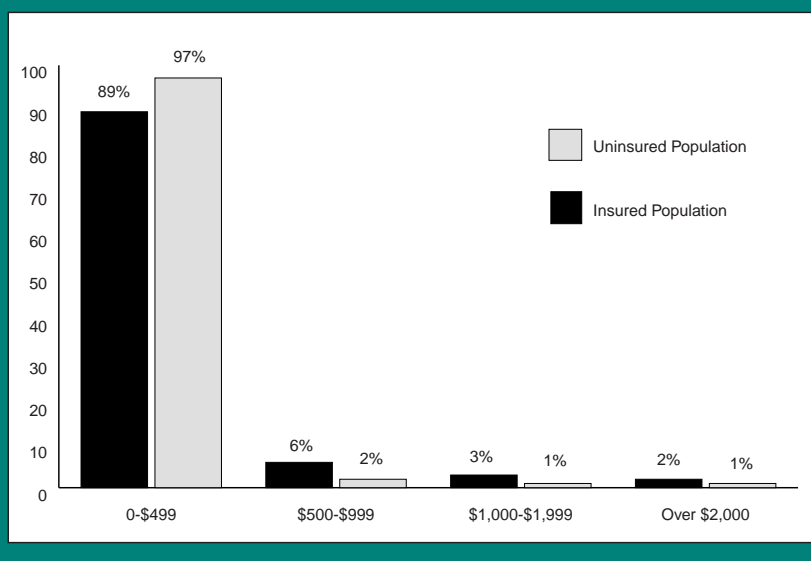
Source: 1996 MEPS from Prescription Drug Coverage, Spending, Utilization, and Prices, HCFA, April 2000. Table 2-14. Estimates for 2000 from authors' calculations.

For the vast majority of Americans, pharmaceuticals are accessible and affordable.



For the nation as a whole, the average out-of-pocket spending on prescription medicines is about 3% of household income. Even when studying people over age sixty-five, the available data indicates that many people in this population have modest expenditures on prescription drugs. Only 3% of all senior citizens in 2000 have out-of-pocket spending over \$2000. There are certain parts of the population who are spending significantly more, but for most people, prescription drugs are a fairly small expense item because of existing private and public insurance coverage plans that offer prescription drugs as a benefit.

DISTRIBUTION OF TOTAL EXPENDITURE ON PRESCRIPTION DRUGS BY NON-MEDICARE INDIVIDUALS, WITH AND WITHOUT PRESCRIPTION DRUG INSURANCE, 1996



Source: Prescription Drug Coverage, Spending, Utilization, and Prices, HCFA, April 2000. Table 2-18. Note: a) Excludes Medicaid population; b) Figures may not add up to 100% due to rounding.

Using the MEPS data set, which was collected in 1996 by an agency of the federal government, part of HCFA, and released in 2000, to measure the incidence of expenditure for people on Medicare— those over the age sixty-five, 67% of people without prescription drug insurance report spending less than \$500 a year on prescription medications. And 86% report spending less than \$1,000 a year on prescription medications. When extrapolating the 1996 data to the present, between 4% - 11% of people on Medicare without prescription drug insurance, are spending over the \$2000 threshold.

Studying people under age sixty-five, both with and without prescription drug insurance, spending patterns are dramatically different. For the younger and generally healthier part of the population, prescription drug spending is much smaller. Some 97% of the uninsured population spends less than \$500 a year, and 95% of the insured spend less than \$1,000 a year. Except for specialized populations, such as the severely disabled, or the AIDS population, the percentage of people with large prescription drug expenses is extremely small.

Pharmaceutical prices are being held down by a competitive marketplace.

Because of competition at the wholesale and retail levels, the market for prescription drugs is robust and healthy. Within the last two years, a variety of private discount card programs have been announced. The most notable one is operated by Readers' Digest and Merck Medco and is called the YOURxPLAN. In return for a modest enrollment fee, individuals or families obtain a discount card allowing them to walk into a CVS, Walgreen's, or any other of the estimated 40,000 participating pharmacies in the country, and get an immediate discount in the range of 15% - 20%.

Alternatively, superstores like Costco have fully stocked pharmacies and are extremely aggressive discounters with prices that are about 20% below retail. Costco and stores like them have the same relationship to traditional pharmacies as a Home Depot or a Best Buy would have to small retailers. Superstores dramatically lower prices by reducing retail markups.

There is also substantial growth in the number of mail order and internet-based pharmacies. These companies implement cost-effective pharmaceutical programs offering home delivery, with significant discounts as well.

<i>Product</i>	<i>Dosage</i>	<i>Costco</i>	<i>YOURxPLAN.com</i>	<i>YOURxPLAN.com</i>	<i>Retail</i>
			<i>Home Delivery</i>	<i>In-store</i>	
			<i>Price</i>	<i>Price</i>	
Premarin	.9mg	\$69.39	\$66.61	\$70.51	\$87.19
Synthroid	100mcg	\$31.49	\$31.34	\$32.66	\$44.99
Hydrocodone w/APAP	5/500	\$10.29	\$18.88	\$19.10	\$28.89
Trimox	250mg	\$7.79	\$15.47	\$22.92	\$29.99
Prilosec	20mg	\$360.97	\$342.41	\$366.49	\$480.08
Albuterol	2mg	\$13.57	\$14.83	\$12.78	\$13.09
Lipitor	20mg	\$264.07	\$252.85	\$270.38	\$308.93
Prozac	10mg	\$234.17	\$220.23	\$235.38	\$259.50
Lanoxin	250mcg	\$14.99	\$12.02	\$12.37	\$18.90
Norvasc	5mg	\$116.19	\$114.93	\$122.37	\$124.08
Epogen/Procrit	20,000u 1ml	\$239.00	\$220.48	\$233.76	\$284.99
Zocor	20mg	\$333.57	\$329.06	\$352.17	\$363.69
Zoloft	50mg	\$200.77	\$195.02	\$208.32	\$234.00
Prevacid	30mg	\$334.87	\$330.72	\$353.95	\$392.95
Paxil	20mg	\$220.27	\$210.54	\$224.98	\$240.93
Claritin	10mg	\$210.97	\$203.09	\$216.98	\$255.99
Average Discount from Retail Prices		21.30%	20.46%	15.73%	

Source: Costco.com, YOURxPLAN.com, Retail Pharmacies.

Notes: a) Prices as of November 17, 2000 b) Each price is for 100 tablets or capsules. Price for Epogen is for a single unit.

This table represents various prices for prescription medicines in the Boston area as of November 17, 2000. The pharmaceuticals listed are the biggest selling medications, either in dollar terms, or in the number of prescriptions dispensed. Prices are for a standard dosage of 100 tablets or capsules. The retail price was determined by walking into or calling pharmacies for prices.



Large chain stores are buying to supply operations nationwide and are already aggregating at the largest possible scales. So if aggregation, in itself, is a source of savings, those savings are already being achieved by the large drug retailers and distributors.

The competitive market is creating unrestricted, universal discounts of 15% - 20%. It's not clear what, if any, additional advantage would be gained from Section 271.

Restricting access to pharmaceutical treatments through closed formularies can have a very negative impact on patient health.

There is a considerable amount of data suggesting the average pharmacy markup is about 25%. Competitive forces and new distribution channels are pushing retail markups to the lowest possible limits. If consumers are getting universal discounts nearing 20%, like those that can be obtained at Costco or through YOURxPLAN, then there is no way to leverage further discounts without implementing some type of formulary restrictions.

The Massachusetts experience suggests that bulk buying will not provide additional discounts or savings unless it restricts access to pharmaceuticals.

Although the legislation was passed in 2000, the specific guidelines of how Section 271 would be implemented have not been established. There are questions as to how this program will be procured, whether it will include Medicaid, or if it will extend to include all uninsured or underinsured adults in the Commonwealth of Massachusetts. The bill's premise was for uninsured or underinsured residents to get a "discount card" for a small fee to use when purchasing prescription drugs. The program was not intended to be subsidized or a substitute for insurance. Its aim is to achieve volume discounts by aggregating purchases on a large scale from pharmaceutical manufacturers that in turn would be passed onto consumers.

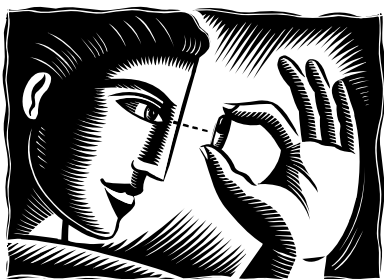
The Commonwealth of Massachusetts has fewer potential purchasers of drugs than national chains or distributors have across the country. Massachusetts, if it were operating on its own, would actually be a small player in the market. Large chain stores are buying to supply operations nationwide and are already aggregating at the largest possible scales. So if aggregation, in itself, is a source of savings, those savings are already being achieved by the very large drug retailers and distributors. Reports in the media suggesting consumers would save 30% - 40% off retail as a result of Section 271 are unrealistic. The market is making universal discounts of 15% - 20% available and reducing average markups to only 25%.

In Massachusetts there hasn't been any discussion of a formulary for Section 271. If the plan is going to be based on manufacturer rebates, a restrictive formulary needs to be developed. Restricting access to medications may benefit some by lowering cost, but at the same time, restricting access can have a negative impact on patient care.

Formularies vary in their degrees of restrictiveness. A very closed formulary, would for a particular therapeutic class, make one drug available. The so-called three-tier formulary is becoming more common, where the arrangement is for a certain drug to be preferred. Consumers can buy the preferred medication at the lowest co-pay. But then there is a second, or a third tier, where other drugs, ones that are generally newer and more effective are available from the same therapeutic class. But those medications are made to cost significantly more. In that way, a plan member has access potentially to all the drugs within a therapeutic class, but only one medication is really favored. On the positive side, all drugs are available. The downside in terms of expenditures, is that manufacturers have less of an incentive to grant a rebate or discount because the formulary is not as closed.

Allowing the marketplace to determine pharmaceutical prices creates an incentive for innovation and offsets the high cost of development.

Historically, inventors are awarded patent protection for a limited time. Once a patent expires, it's available to anyone. In every industry, patent holders attempt to get the highest return for their investment. Pharmaceuticals are extremely costly to develop and then relatively inexpensive to manufacture. Primarily because of their development costs, new, more advanced medications are priced higher than the ones they replace. Allowing the marketplace to determine prices for patented medicines creates an offsetting benefit to the outlays for development and provides a stimulus for innovation.



It's a competitive "world market" for the pharmaceutical industry and inaccurate to compare prices between countries.

To analyze the "world market" for pharmaceuticals is extremely complicated. It appears that pharmaceutical prices are higher in the US than in other industrialized countries. But at the same time, it's a world market for prescription drugs. Even if a manufacturer develops a drug in Switzerland, England, or anywhere else in the world, they do so with the expectation that a very large percentage of their sales will be in the US. It is inaccurate to conclude that because GlaxoWellcome conducts research and is headquartered in England, pharmaceutical prices in England govern the development of their products. If US prices were brought down to some much lower level that would be deemed to be comparable to another country, the effect on industry profitability would be very dramatic. At that point R&D would be negatively impacted because it is not an automatic, insulated process.

It is a misconception that the pharmaceutical industry is unusually profitable.

In addition to being investigated by numerous academics who are totally outside the industry, two studies at the federal level, one by the General Accounting Office, and another from the Congressional Budget Office, conclude that the pharmaceutical industry is not unusually profitable given its other characteristics.



Conclusion



Increasing expenditures on prescription drugs are a major source of derision for those involved in the delivery of healthcare and the formulation of public health policy. The rising costs are primarily due to increased utilization. Advanced new treatments and changes in the population are resulting in more drugs being used to treat more people. Price increases for specific medications are comparable or only slightly more than the overall inflation rate.

From the standpoint of the presenters, they would not advocate implementing price controls or restricting access in an effort to contain pharmaceutical expenditures. Free markets have many positive impacts on the economy, including the delivery of healthcare. Competitive forces are changing the retail pharmaceutical markets and in some ways are actually lowering prices. Aggregation at the largest possible scales is already taking place and enabling the general public to save 15% - 20% on the cost of prescription medicines. State sponsored bulk-buying programs would seem to duplicate what's already occurring in the free market.

For the vast majority of people, the cost of prescription medications is a very small portion of household income. However, there is a small, but growing portion of the population whose expenditures are significant. The idea of capping a person's exposure through insurance while allowing market forces to work, seems like a better approach as a matter of principle in dealing with this problem.

The opinions expressed are of the presenters, and do not necessarily reflect the opinions of any institutions with which they are affiliated with, or of the sponsor.



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