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ISSUE BRIEF

Factors Affecting the Growth of Prescription Drugs Expenditures

July 1999

Spending on prescription drugs has increased much more rapidly than spending on other health care services in recent years, growing twice as fast as total national health spending between 1993 and 1998 (averaging 12.2 percent growth per year compared to 5.1 percent per year for total health spending).¹

Growth in drug spending has been at double-digit rates since 1995 and has been accelerating each year since 1993. (See Table A.) Preliminary estimates suggest the 1997-1998 growth rate will at least equal the 1996-1997 rate and may exceed 18 percent.

Table A. Growth in Prescription Drug Expenditures, 1993-1998

Year	Dollar Amount (billions)	Percent Increase over Prior Year
1993	\$50.6	8.7%
1994	\$55.2	9.0%
1995	\$61.1	10.6%
1996	\$69.1	13.2%
1997	\$78.9	14.1%
1998 (HCFA proj)	\$90.0	14.0%
1998 (S-L est)	\$93.4	18.4%

Source: HCFA, National Health Expenditure projections, July 13, 1999. Second estimate for 1998 from Scott-Levin Source Prescription Audit.

Much of this is well known. But why is prescription drug spending growing so fast? What kinds of drugs are we spending our money on? Is rapid growth likely to continue? And, if so, what are the implications for Medicare and private health insurance?

¹ Growth Rates calculated from Health Care Financing Administration, National Health Expenditures projections, July 13, 1999.

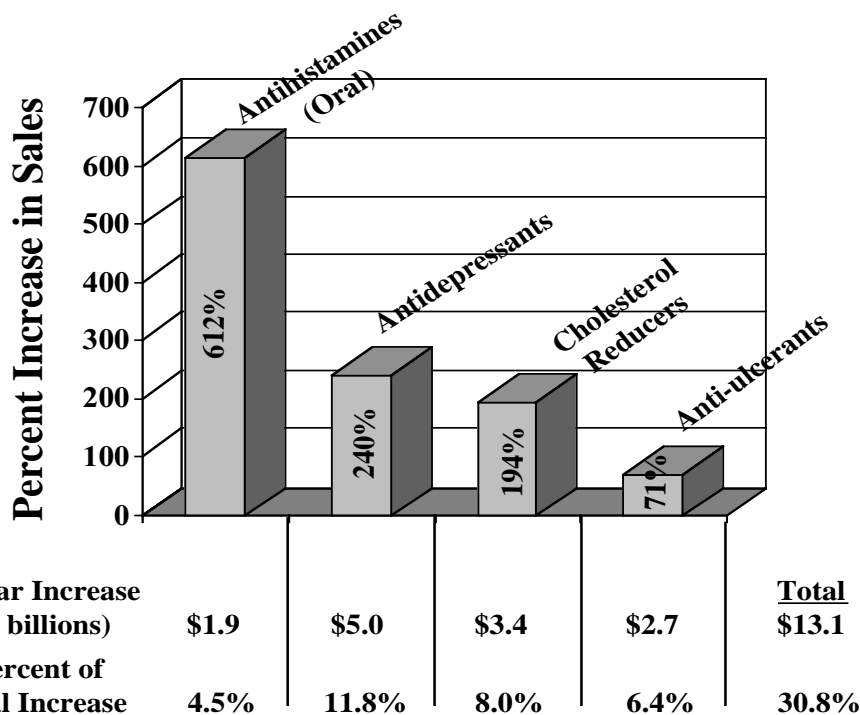
To answer these questions, this *Brief* examines the estimated \$42.7 billion (84 percent) increase in retail drug expenditures between 1993 and 1998 using a comprehensive dataset on sales of drugs at the retail level. The key findings of the analysis are:

Spending Growth Is Concentrated in a Few Therapeutic Categories, Which Tend to Include Heavily Advertised Drugs

Increases in total drug spending have been concentrated in a relatively small number of therapeutic categories. Four categories of drugs accounted for 30.8 percent of the total \$42.7 billion increase in drug spending between 1993 and 1998. (See Figure A.) These four categories include seven of the ten drugs most heavily advertised to consumers in 1998 (indicated by asterisks).

- ◆ Spending on oral antihistamines such as Claritin*, Zyrtec*, and Allegra* increased by 612 percent between 1993 and 1998, representing 4.5 percent or \$1.9 billion of the total increase in drug expenditures.
- ◆ Spending on antidepressants such as Prozac*, Zoloft, and Paxil increased by 240 percent between 1993 and 1998, representing 11.8 percent or \$5 billion of the total increase in drug expenditures over this time.
- ◆ Spending on cholesterol-reducing drugs such as Lipitor, Zocor*, and Pravachol* increased by 194 percent between 1993 and 1998, representing 8 percent or \$3.4 billion of the total increase in drug expenditures.
- ◆ Spending on anti-ulcerant drugs such as Prilosec*, Prevacid, and Pepcid increased by 71 percent between 1993 and 1998, representing 6.4 percent or \$2.7 billion of the total increase in drug expenditures.

Figure A. Percentage Increase in Spending for Four Top Therapeutic Categories, 1993-1998



Source: Barents Group analysis of Scott-Levin Source Prescription Audit Data for 1993 and 1998.

Heavily Advertised Drugs Are a Major Source of Spending Increases

The 10 drugs most heavily advertised directly to consumers in 1998 accounted for \$9.3 billion or about 22 percent of the total increase in drug spending between 1993 and 1998.

- ◆ In addition to the seven drugs identified above, these drugs also included Propecia (a hair-loss treatment), Evista (an osteoporosis drug), and Zyban (a smoking deterrent). (See Figure B.)
- ◆ Many heavily advertised drugs, particularly antihistamines, antidepressants, and cholesterol reducers, are likely to be used on an ongoing basis.

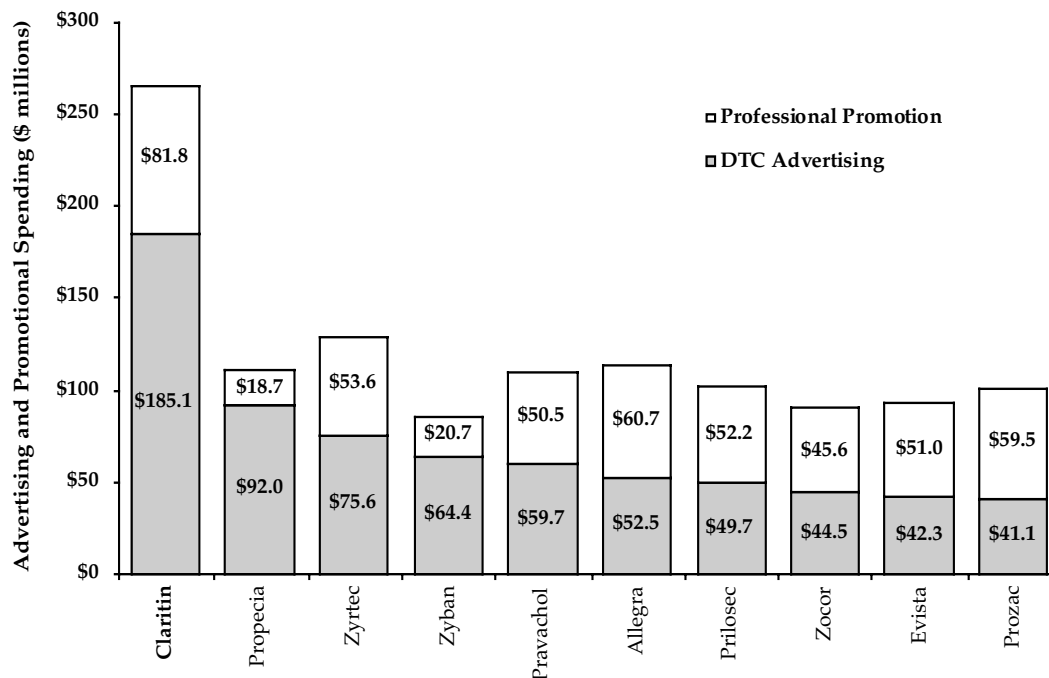
In 1998, pharmaceutical manufacturers spent \$8.3 billion promoting their products in the United States. About \$1.3 billion was spent on direct-to-consumer (DTC) advertising and \$7.0 billion on advertising and detailing to health care professionals.²

- ◆ The makers of the antihistamines Claritin, Zyrtec, and Allegra spent \$313 million on DTC advertising for these products in 1998. Together, these three drugs accounted for 90 percent of sales of prescription antihistamines and 2 percent of total drug spending in that year.

Policy changes by the FDA, particularly a 1997 relaxation of guidelines for broadcast advertising, have allowed drug manufacturers to engage in much more extensive direct-to-consumer advertising.

² Scott-Levin, "The Pharmaceutical Industry: More Reps and More Promotion Fuel New Launches," press release, 18 June 1999. Accessed June 29, 1999, from www.scottlevin.com.

Figure B. Promotional Spending on Ten Drugs With Largest Amounts Spent on Direct-to-Consumer Advertising, 1998



Source: IMS Health, press release, 21 April 1999.

DTC Advertising Works

There is considerable evidence that DTC advertising works. Doctors' visits for heavily advertised conditions rose 11 percent between January and September 1998, compared to a 2 percent increase in total office visits.³ Patients are becoming more likely to ask for prescription drugs by brand name. A 1998 survey found that 53 percent of physicians reported an increase in brand name requests, up 30 percent from mid-1997 (before the relaxation of FDA guidelines for television advertising). The increase in brand awareness was especially felt by allergists, 97 percent of whom said that DTC ads had influenced their patients.⁴

Doctors are very likely to honor patients' requests for a specific prescription drug. A 1997 study found that 73 percent of consumers said their doctors accommodated their request for a specific drug.⁵ Research by Scott-Levin found that patient requests for Claritin in the year ending September 1997 were honored 86 percent of the time.⁶

³ Scott-Levin, "Patient Visits Up for DTC Conditions," press release, 6 November 1998.

⁴ IMS Health, "IMS Health Reports Direct to Consumer Advertising Increases Prescription Pharmaceutical Brand Requests and Awareness," press release, 15 September 1998.

⁵ PREVENTION and the American Pharmaceutical Association, "Navigating the Medical Marketplace: How Consumers Choose," a joint survey, Washington, D.C., 1997, pp. 25-29.

⁶ Scott-Levin, "Direct-to-Consumer Pharmaceutical Ads 'Raising Consumer Awareness,' Says Scott-Levin", press release, 24 July 1998.

Use of Less Expensive Antihypertension Drugs Drops Despite Official Recommendation

In 1993, the Fifth Joint National Committee on the Detection, Evaluation, and Treatment of High Blood Pressure recommended diuretics and beta-blockers as first-line therapy for patients with hypertension (unless contraindicated). Subsequently, a study published in JAMA found that physicians wrote fewer prescriptions for those drugs and more prescriptions for the more expensive, brand-name calcium channel blockers and ACE inhibitors in 1995 than in 1992.⁷ It has been suggested that the heavy promotion of brand name drugs contributes to this difference; in fact, calcium channel blockers are among the most heavily promoted drugs in the New England Journal of Medicine.⁸

The Debate Over Drug Advertising

Drug advertising is controversial. Advocates argue that it expands consumers' knowledge of health conditions and potential treatment options, which facilitates dialogue between consumers and their physicians and encourages consumers to assume more responsibility for their health care.

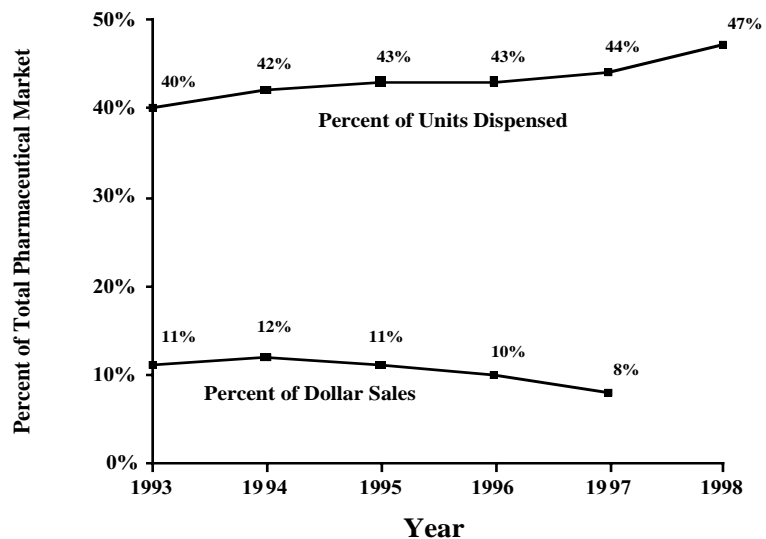
Critics say DTC advertising raises difficult issues of value and cost, since newer or more expensive products advertised through DTC marketing may not be the most effective for all patients with a given condition. Similar complaints have been lodged against advertising and promotional efforts aimed at physicians. (See box for an example.)

Generic Drugs Have a Small Market Share, Despite Lower Prices

In dollar terms, generic drugs accounted for only 8 percent of all prescription drug sales in 1997, despite accounting for a large share in terms of volume (47 percent of units dispensed in 1998). (See Figure C.)

When newer products are introduced and heavily marketed, they tend to rapidly dominate sales in their therapeutic class. For example, for treatment of gastrointestinal diseases, the new branded proton pump inhibitors Prilosec and Prevacid have largely replaced the earlier indirect inhibitors like Zantac and its generic equivalent ranitidine, with the two new branded drugs attaining a 63-percent market share in 1998.

Figure C. Market Share of Generic Drugs in Units and Dollar Sales, 1993-1998



Source: IMS Health and IMS America. Sales figures for generic drugs in 1998 are not yet available.

⁷David Siegel, MD, MPH, Julio Lopez, PharmD, "Trends in Antihypertensive Drug Use in the United States: Do the JNC V Recommendations Affect Prescribing?" *JAMA* 278(21) (December 3, 1997) 1745-1748.

⁸Catherine Arnst, "Is Good Marketing Bad Medicine?" *Business Week*, April 13, 1998, p. 62. Accessed from www.scottlevin.com.

Spending Is Up Because of Both Higher Prices and Increased Utilization

As Table B shows, higher drug prices account for 64 percent of the total 1993-98 increase in drug spending, and increased utilization accounts for 36 percent of the increase.

Driving the increase in average price per prescription is the introduction and widespread use of costlier new drugs.

- ◆ In 1998, the average price per prescription for new drugs (those introduced in 1992 or later) was \$71.49, more than twice the average \$30.47 price for previously existing drugs.
- ◆ In some therapeutic categories, new branded drugs are many times more expensive than older products. For example:
 - ◇ Imitrex, a non-narcotic analgesic, cost an average of \$153.58 per prescription in 1998, more than seven times the \$20.64 average price of older prescription drugs in its category.
 - ◇ The fungicides Lamisil and Sporanox, at average 1998 costs of \$182.01 and \$195.65 per prescription, are about six times more expensive than the older drugs in their class, which averaged \$31.22 per prescription.
 - ◇ Heavily advertised Zocor cost \$98.26 per prescription in 1998, 37 percent more than older cholesterol reducers.

- ◇ Prevacid and Prilosec, both new and one heavily advertised, cost \$112.46 and \$122.80 per prescription 1998, 29 percent and 41 percent more expensive, respectively, than the average \$86.99 cost of older anti-ulcerants.

- ◆ More than half the increase in spending associated with new drugs can be attributed to the fact that they cost more than twice as much as older drugs, on average.
- ◆ Use of newer, more expensive drugs increased the average price per prescription from \$26.61 in 1993 to \$37.38 in 1998.
- ◆ Increases in the price of older drugs have been fairly modest. Between 1993 and 1998, the average price per prescription of these drugs increased by an average rate of 4.2 percent annually, about the same as overall medical inflation.

The number of prescriptions filled increased by almost 600 million, growing from 1.9 billion in 1993 to 2.5 billion in 1998.

- ◆ Total utilization of drugs in many leading therapeutic categories more than doubled between 1993 and 1998; for example, the number of prescriptions filled for antidepressants increased by 111 percent to 120 million in 1998, for cholesterol-lowering drugs by 162 percent to 68 million prescriptions, and for oral antihistamines by 500 percent to 41 million prescriptions.

Table B. Percentage Contribution of Changes in Price and Utilization to 1993-98 Increase in Prescription Drug Spending

	Price Effect	Utilization Effect
New Drugs (1992 and later)	42%	23%
Older Drugs	22%	13%
TOTAL	64%	36%

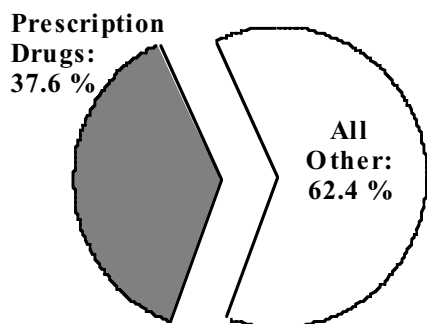
Source: Barents Group analysis of Scott-Levin Source Prescription Audit Data for 1993 and 1998. For older drugs, the price effect measures additional spending due to the increase in the average price per prescription between 1993 and 1998 for these drugs. For newer drugs, the price effect measures increased spending due to the fact that the average price per prescription for these drugs in 1998 is higher than the 1993 average price per prescription for older drugs. For both new and old drugs, the increased spending due to a greater number of prescriptions filled is calculated using the 1993 average price per prescription for older drugs.

Employers and Health Plans Have Borne Much of the Increased Cost of Prescription Drugs

Most of the recent increase in drug spending has been borne by private third-party payers — health plans and employers — which have seen their outlays for prescription drugs more than double, while consumers have been largely shielded from increases in drug costs.

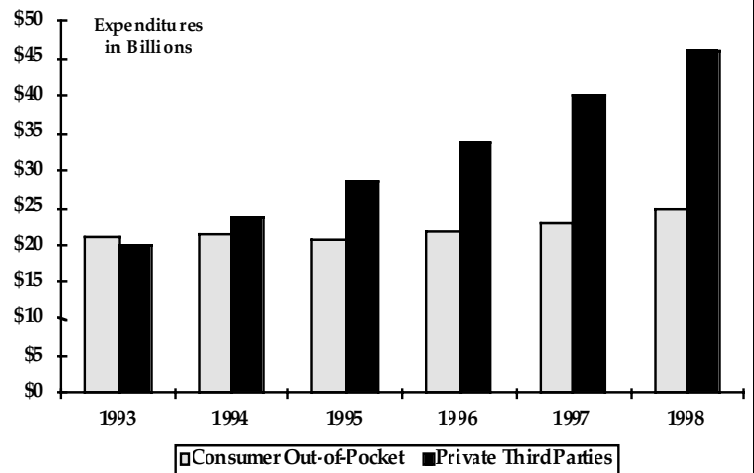
- ◆ Between 1993 and 1998, prescription drug spending by private third parties grew 130 percent, from \$20.1 billion to \$46.3 billion, while consumer out-of-pocket spending on prescription drugs grew only 17 percent, from \$21.2 billion to \$24.8 billion. (See Figures D and E.)
- ◆ Prescription drugs accounted for a large part — more than 37 percent — of the 5-year increase in total health care costs paid by employers and health plans. (See Figure F.)
- ◆ Consumers' out-of-pocket spending decreased from 51 percent to 35 percent of total private (non-government) spending on prescription drugs.

Figure F. Prescription Drugs Accounted for 37.6 Percent of the Total 1993-98 Increase in Medical Benefits Paid by Private Employers and Health Plans



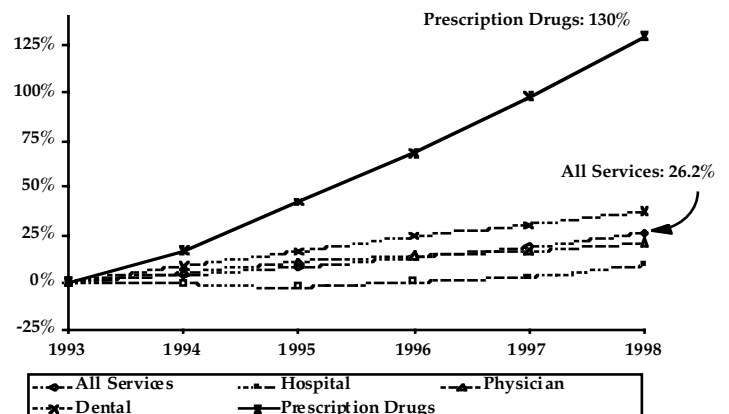
Source: Health Care Financing Administration, National Health Expenditure projections, July 13, 1999.

Figure D. Private Drug Spending, By Source of Payment, 1993-1998



Source: Health Care Financing Administration, National Health Expenditure projections, July 13, 1999.

Figure E. Cumulative Increase in Spending by Private Third-Party Payers, by Service Type, 1993-1998



Source: Health Care Financing Administration, National Health Expenditure projections, July 13, 1999.

- ◆ The shift to managed care, in particular, has influenced drug spending. Low out-of-pocket costs in managed care (typically \$5-\$10 per prescription) increase patient access to doctors and often insulate consumers from most of the cost for their medications.

Drug Spending Increases Are Likely To Continue, If Not Accelerate

Recent trends in drug expenditures are likely to continue, if not accelerate, for several reasons:

- ◆ The pharmaceutical industry is both research intensive and marketing intensive.
 - ◇ In 1998, the industry spent over \$17 billion on research and development in the United States⁹ and about \$8.3 billion promoting its products in the U.S.
 - ◇ Both of these figures are expected to increase in future years. The Pharmaceutical Research and Manufacturers of America (PhRMA) projects 1999 R&D spending to grow by 17 percent from 1998¹⁰, while spending on DTC advertising is expected to grow 54 percent over 1998 levels.¹¹
 - ◇ Many new drugs are already “in the pipeline”; new computerized techniques are speeding up the process of developing potential new drugs; and advances in the basic sciences, particularly in genetic research, are expected to increase the number of targets for drug intervention exponentially over the next few years.
- ◆ Research advances coincide with demographic trends, such as the aging of the baby-boomers, that will greatly increase the number of Americans at risk for chronic and potentially disabling conditions.

Policy Implications

Pharmaceutical research has brought great improvements in health and longevity. Given the increasing investment in research and development, more such welcome advances can be expected in the future. But, while some new drugs are true breakthroughs, opening up new avenues of treatment that have not previously been available, others may offer more modest improvements on earlier therapies at considerably greater expense.

⁹Pharmaceutical Research and Manufacturers of America, “Pharmaceutical Industry Profile 1999,” Figure 2-1. Accessed June 30, 1999, from www.phrma.org.

¹⁰ *Ibid.*

¹¹ *The Wall Street Journal*, 8 June 1999, p. B14 (reporting on projections by IMS Health).

More research is needed on several important questions:

- ◆ How do we leverage the tremendous potential of pharmaceuticals and assure that the right drugs get to the right people safely and at the right time?
- ◆ Under what circumstances is each new drug the most appropriate treatment, compared to the available alternatives?
- ◆ Given the large increase in prescription volume, how can we best limit mistakes and adverse drug interactions?
- ◆ What are the positive and negative effects of DTC advertising, physician detailing and other promotional efforts?
- ◆ What impact will increasing expenditures on prescription drugs have on overall health care spending?

Affordability will increasingly be a concern. As the cost of covering prescription drugs continues to grow, health plans, purchasers and consumers will face difficult choices among promoting access to drug therapies, maintaining health insurance premiums at an affordable level, and continuing to offer other needed benefits. The money to pay for more expensive new drugs must come from higher premiums, higher out-of-pocket costs (e.g., “triple-tier” copayments), lower benefits, and/or more restricted access to drugs (e.g., formularies).

In addition, the possible inclusion of a prescription drug benefit in the Medicare program makes understanding what is driving the increase in pharmaceutical expenditures all the more important. For private third-party payers, which cover a younger, healthier population, prescription drugs already represent about 13 percent of health benefit outlays. Some plans with many retirees report that drug costs are approaching 30 percent of total benefits.¹² Pharmaceutical research is focused on new drugs that will target the chronic and disabling diseases of the elderly. The experience of private insurers, particularly those covering older populations, suggests that the cost of Medicare coverage of prescription drugs will likely be substantial from the outset and increase significantly over time.

¹² Testimony of the Blue Cross and Blue Shield Association on Prescription Drug Benefits and the Medicare Program for the Committee on Finance, U.S. Senate, presented by Dr. Morris B. Mellion, June 23, 1999, p. 5.

ABOUT NIHCM FOUNDATION

The National Institute for Health Care Management Research and Educational Foundation is a nonprofit organization whose mission it is to bring together the private and public sectors to make meaningful improvements in health care for all Americans.

ABOUT THIS BRIEF

This Brief summarizes the findings of a report by the same name prepared by the Barents Group, LLC. Copies of the full report may be ordered from NIHCM Foundation by mail or fax (202-296-4319) or can be downloaded from the Foundation's website at www.nihcm.org.

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