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# Health Care Expenditures: International Comparisons, 1970-80

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*This article is based on the findings of a study developed to compare health care costs in the United States during 1970-80 with those of six other industrially advanced countries—Canada, France, the Federal Republic of Germany, the Netherlands, Sweden, and the United Kingdom. Although health care expenditures in the United States have traditionally been relatively high, as a share of gross national product, they were exceeded in 1980 in West Germany and Sweden and equaled by the Netherlands. All the countries experienced increases in health care spending that outpaced inflation in other sectors of the economy. For the decade as a whole, the United States encountered a slower rate of growth than most of the other countries, both in terms of actual expenditures and when adjusted for inflation as measured by the Consumer Price Index. As the decade progressed, however, most of the other countries succeeded in slowing their rate of increase to a greater degree than did the United States. The data also suggest that wage inflation was less of a factor in raising the cost of health care in the United States than was the case in most of the other countries.*

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*The Social Security Administration (SSA) receives numerous requests for estimates of foreign health care expenditures from inquirers who are interested in comparing U.S. expenditures with the foreign experience. The search for new cost-cutting approaches in the delivery of health care here and abroad gives added impetus to interest in comparative rates of growth in health expenditures in a variety of systems that differ in their approach toward providing health care.*

This article is based on a study aimed at determining the level of medical care spending in calendar year 1980 for six countries (Canada, France, the Federal Republic of Germany, the Netherlands, Sweden, and the United Kingdom) that, in their advanced stage of economic development and high level of medical care, bear similarities to the United States.

Although the study does not cover developments since 1980, the results retain relevance to the more im-

mediate past, at least as presented by provisional data. A large part of the pattern of trends established in the latter part of the 1970-80 decade seems to have remained intact since then. One such notable trend is the tendency of the United States to surrender its long-held position as the country with the lowest annual increases in total health expenditures among the countries studied.

The present study is an update of one undertaken by SSA several years ago that provided estimates of health spending through 1975 and, in some cases, for 1976.<sup>1</sup> The results were published in a January 1980 article in the *Social Security Bulletin*. The countries in that study, in addition to the United States and the six mentioned above, included Australia and Finland.<sup>2</sup>

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<sup>1</sup> For more information on the earlier study, see Joseph G. Simanis and John R. Coleman, "Health Care Expenditures in Nine Industrialized Countries, 1960-76," *Social Security Bulletin*, January 1980, pages 3-8.

<sup>2</sup> Data for Australia and Finland were not available for updating purposes at the time this study was prepared. Relevant figures for those countries will be included in subsequent studies.

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## Methodology

### Definitions and Data Sources

The concept of health care used in this analysis was originally developed by SSA's Office of Research and Statistics and further refined by the Health Care Financing Administration (HCFA). The concept basically includes all comprehensive medical expenses (including over-the-counter medicines as well as prescription drugs), administrative expenses, and health insurance overhead costs. Dental care, nursing-home care, eyeglasses, and appliances are also included, as are education of health care professionals and health research. The totals for physician services, as well as diagnostic and hospital services, take into account direct and indirect government subsidies and other forms of public and private funding. No attempt, however, has been made to arrive at estimates for imputed rent where providers operate from public facilities provided to them free of charge.

The estimates for total health care expenditures do not include public and private disbursement of cash payments of an income-maintenance nature, generally called "cash sickness benefits" or "temporary disability payments." They also do not include the cost of care that is primarily custodial rather than medical in nature. Along the same lines, such cash benefits as constant attendance allowances for the infirm are also not included.

The most important single source of data obtained for the individual countries studied was provided by official government publications in the form of statistical abstracts and interpretative background on health care delivery costs. This information was supplemented by material provided directly by government offices abroad and by other recognized authorities in the field of health economics. The estimates for the United States are derived from the series now prepared by HCFA and, for earlier years, by SSA. The data obtained from Canadian sources are based on the same reporting approach as used by the United States and have been accepted as representing a high degree of comparability with American data.

In the other countries studied, the health care delivery systems diverge more from our system and employ a wide variety of statistical approaches to present expenditure estimates. The resulting data often offer little comparability between one series and another. Appropriate estimates, therefore, had to be developed in a number of instances to avoid double counting and to bridge gaps, most notably for various private expenditures that close analysis indicated were not addressed by the published figures. The resulting approximations, however, were reviewed and amended by specialists in each country concerned.

Since 1975, the Statistical Office of the West Ger-

man Government has developed an improved series of estimates for national health costs that seems to account for all significant expenditures and closely parallels the SSA estimates. For more recent years, these estimates have accordingly been accepted with minor modifications.

This research effort has not only drawn on the earlier SSA study, but has also benefited from the data collection and insights provided by a number of prior economic studies conducted by national and international organizations, beginning with the pioneering work of Brian Abel-Smith of nearly two decades ago.<sup>3</sup> More recently, studies produced by the Organization for Economic Cooperation and Development (OECD) have also proven to be of considerable value. Although OECD figures sometimes diverge significantly from SSA results, the analysis and detailed statistics provided by these studies have proved to be invaluable ingredients in arriving at final estimates for this article.

### Methods of Comparing Costs

This study compares health care expenditures in the United States and six foreign countries for the year 1980. The figures are presented as shares of gross national product (GNP). They are then compared with corresponding data previously derived in the earlier 1980 study for the years 1970 and 1975 to determine what changes took place during the decade of the 1970's and to what extent trends coincide or diverge between the two 5-year periods—1970-75 and 1975-80.

Percentage increases for the 10-year period are also given for actual outlays in health expenditures and for expenditures adjusted for wage and price inflation. Corresponding figures are given for each 5-year period.

### Major Findings

The results provide still another confirmation of the widespread view that health care costs are a universal problem in industrialized countries and have generally outpaced inflationary trends in the rest of the economy.

However, as noted below, trends in the second half of the study period indicate that while, on balance, health care expenditures for the countries studied continued to absorb a rising share of GNP, the rate of increase in most countries abated considerably. Although the average amount spent on health care in

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<sup>3</sup> Brian Abel-Smith, *An International Study of Health Expenditures* (Health Paper No. 32), World Health Organization, 1967. See also Organization for Economic Cooperation and Development, *Measuring Health Care, 1960-1983: Expenditures, Costs and Performance*, Paris, 1985.

the seven countries rose in terms of GNP by 1.4 percentage points—from 6.6 percent in 1970 to 8.0 percent in 1975—the average increase registered subsequently (up to 1980) was only an additional one-half percentage point, bringing the average to 8.5 percent.

To a considerable extent, the findings seem to refute widely held assumptions that, over a period of time, spending for health care in the United States as a share of GNP is the highest in the world. In fact, in each of the benchmark years (1970, 1975, and 1980), the share of GNP spent by the United States for health care was exceeded by at least one of the other countries in the study.

The findings also tend to refute another popular assumption, that medical care costs have been consistently rising faster in the United States than elsewhere. As the details of the following analysis show, of all the countries studied, the United States experienced the slowest rise in actual expenditures over the 10-year period.

Despite the relative success of the United States in this regard, this trend was less pronounced during the latter part of the decade. In the earlier period, 1970-75, this country held the percentage increase in its health care spending to only 77.6 percent—less than two-thirds of the average increase registered for all seven countries (116.9 percent). For the later period, 1975-80, the increase in U.S. spending for health care rose to 87.6 percent—slightly exceeding the average of 86.5 percent for all seven countries over the same period.

### Shares of Gross National Product

Data on the percentage of GNP devoted to health care expenditures in 1980 in the countries studied can be seen in the following tabulation:

Country	Health care expenditures as share of GNP
Federal Republic of Germany . . . . .	9.6
Sweden . . . . .	9.4
Netherlands . . . . .	9.1
United States . . . . .	9.1
France . . . . .	8.8
Canada . . . . .	7.4
United Kingdom . . . . .	5.8
Average . . . . .	8.5

The countries are listed in descending order according to the share of their GNP expended for this purpose. The Federal Republic of Germany, which spent 9.6 percent on health care, ranks first, followed by Sweden with 9.4 percent. The United States and the Netherlands are both in third place, with 9.1 percent. The United Kingdom, which, among industrialized countries, has consistently devoted a relatively modest

share of GNP to health care, ranks last.<sup>4</sup>

For purposes of comparison, the percentage of GNP devoted to health care in 1970 and 1975 for each of the countries studied is given in table 1. The overall pattern is mixed but allows for a few general observations. The share of GNP spent on health care remained the lowest in the United Kingdom for all three benchmark years reviewed (1970, 1975, and 1980). West Germany, in contrast, rose from a relatively low position in 1970 to the top in 1975 and remained there in 1980.

The United States dropped from second place in 1970 to fourth in 1975. It remained in the middle range through 1980, when it tied with the Netherlands for third place. With regard to relative changes in shares of GNP spent on health care, the United States was among the countries registering lower than average increases, rising from 7.4 percent of GNP in 1970 to 9.1 percent in 1980.

During the decade from 1970 to 1980, the United States registered an increase of 23 percent, compared with an average of 28.9 percent for all seven countries. Canada and the United Kingdom, with respective increases of 4.2 and 18.4 percent, were the only countries showing a more modest increase in this respect than the United States. In 1975-80, however, the United States registered a greater acceleration in its spending than did most of the other countries. During this time, U.S. health care expenditures rose from 8.3 percent to 9.1 percent of GNP, representing a 9.6 percent rate of increase. This rate was exceeded only by that of Sweden (11.9 percent) in the period.

As already noted, all seven countries studied showed sustained growth in health care expenditures throughout the decade and generally devoted a growing share of GNP for this purpose. On balance, however, the rate of growth slowed in the second half of the decade to an average rate of 6.2 percent, compared with 21.2 percent in the first half.

In one regard, West Germany represented a notable exception to the pattern established in the other countries. Instead of increasing its share of GNP spent on health care in the 1975-80 period, it succeeded in achieving a slight decrease. The proportion of GNP devoted to health care dropped from 9.7 percent to 9.6 percent. Nevertheless, as a result of the extremely large increase experienced in the first half of the decade (from 6.1 to 9.7 percent of GNP), it still registered the greatest rate of growth among the countries studied, when change is averaged over the years from 1970 to 1980. Over the 10-year period, West Germany experienced a 57.4-percent increase (6.4 percent of GNP in 1970, compared with 9.6 percent in 1980).

<sup>4</sup> Joseph G. Simanis and John R. Coleman, *op. cit.*

The increasing portion of national resources required to meet growing health expenditures is not a recent phenomenon. As far back as the early 1960's, a number of analysts, after reviewing Brian Abel-Smith's pioneering comparative study of health care expenditures, predicted that, typically, each decade could be expected to absorb an additional 1 percent of GNP for health care. Their expectations proved to be overly conservative, however. In the 1970's, for instance, the countries studied experienced an average increase of nearly two percentage points (6.6 percent in 1970 and 8.5 percent in 1980). Most of this change came in the first half of the decade, however, when the average increase was 1.4 percent. In the second half, it was one-half a point, or less than half that amount.

Canada and the United Kingdom were the only countries in which expenditures did not grow by at least one percentage point. With an increase of 1.7 percentage points, the increase in the United States was somewhat below the average increase of two percentage points during the whole period. However, in the years 1975-80, the U.S. expenditures grew by 0.8 percentage points and outpaced the 0.5 percentage point average for the seven countries.

### Actual Expenditures

Most frequently, for purposes of comparability, discussions of intercountry development in health care costs concentrate on expenditures as a share of GNP. However, trends in actual expenditures are also of interest to many analysts.

As can be seen in table 2, when trends in actual health care expenditures rather than expenditures as a share of GNP are examined, a notable change in country rankings occurs. For the 1975-80 period, the United Kingdom has the greatest increase (121.7 percent). The Federal Republic of Germany has the lowest increase (42.8 percent) for the same period, and the United States has the fourth highest rate of increase (87.6 percent).

Over the 10-year period, the increase in actual expenditures was likewise the highest in the United Kingdom (424 percent). During this longer span, the United States registered the smallest increase in actual expenditures (an increase of 233 percent, compared with an average of 305 percent for the seven countries).

The average increase for all seven countries dropped significantly in the second half of the decade—from 116.9 percent during the 1970-75 period to 86.5 percent in the 1975-80 period. This decrease took place even though inflation, as measured by the Consumer Price Index (CPI), actually increased—from 50.1 percent over the 1970-75 period to 55.2 percent in the following 5-year period.

### Expenditures Adjusted for Price Inflation

When the increase in health care expenditures is adjusted for changes in the CPI, another sequence emerges (table 2). For the 1975-80 period, the Netherlands takes first place (with 26.3 percent), followed closely by France (with 26.2 percent) and the United States (with 22.5 percent). The United Kingdom, which had the highest margin of increase in actual unadjusted expenditures, drops to last place after adjustment for the consumer price increase.

It is worth noting that the rate of increase for the seven countries as a whole, after adjustment for price inflation, dropped considerably in the second half of the decade, falling to 20.5 percent from 45.3 percent in the 1970-75 period.

### Wage Inflation

Health care is widely recognized to be an extremely labor-intensive sector of the economy. Wages and earnings are usually assumed to account for at least half of the total costs in industrially advanced economies, and as much as three-fourths in some of them.

During the 10-year period ending in 1980, the increase in wages ranged from 114.6 percent in the Federal Republic of Germany to 323.7 percent in the United Kingdom. In 1975-80, wage increases ranged from a low of 35.1 percent in the Netherlands to a high of 103.2 percent in France. Wage increases exceeded consumer price increases during both periods in all the countries studied except in the United States. In the 1975-80 period, wages in this country rose by 50.6 percent and prices by 53.1 percent.

If actual health care expenditures are deflated by the growth in wages, the percentage increase in the resulting statistics presents still another sequence, significantly different from the rankings previously presented. For the 1975-80 period, the Netherlands again emerges as the country with the greatest increase (25.4 percent). France registers the lowest increase (only 2 percent). The United States comes out as a close second behind the Netherlands, with a 24.6-percent increase. Health care costs in both countries were presumably subject to upward pressure due to non-labor cost factors still to be determined.

Both the Netherlands and the United States also registered a relatively high increase in health care spending adjusted for wage inflation when measured over the 1970-80 period. During the full 10-year period, the Netherlands registered the highest in this regard among the seven countries studied, with a 62.9-percent increase. The United States, with a 53.6-percent increase, was third, following West Germany, which registered a 61.1-percent increase.

## List of References

The most significant sources used in arriving at the estimates in this article are given below.

### Canada

**National Health Expenditures in Canada, 1970-1982**, Health and Welfare Canada, Ottawa, April 1975.

### France

**Comptes Nationaux de la Sante, Methodologie, Resultats**, 1950-77, 1979; CREDOC, Paris, 1979; **Comptes Nationaux de la Sante**, 1980, 1981, 1982, Ministere de la Sante, Paris, March 1983; correspondence and data received from CREDOC, 1984.

### Germany (Federal Republic)

"Struktur und Entwicklung der Ausgaben fur Gesundheit, 1970 bis 1980," **Wirtschaft und Statistik**, August 1982, pages 579-588.

### Netherlands

**Statistical Yearbook of the Netherlands**, Netherlands Central Bureau of Statistics, The Hague;

**Health Care in the Netherlands, Financial Analysis 1976-83**, Health Care Finance Division, Ministry of Health and Environmental Protection, Leudschendam, September 1982; data provided by Dr. H. J. Lammers, health care consultant and former director of Netherlands National Information System of Sick Funds.

### Sweden

**Statistisk Arbok for Sverige** (1976 through 1982), Statistiska Centralbyran, Stockholm; correspondence and data from Statistics Sweden, National Accounts Division.

### United Kingdom

**Annual Abstract of Statistics**, Central Statistics Office, London, 1982.

### United States

"National Health Expenditures, 1985," **Health Care Financing Review**, fall 1986, vol. 8, No. 1, pages 1-21.

Data on GNP, the consumer price index, and the wage index were derived from International Monetary Fund, **International Financial Statistics**, Washington, D.C.

**Table 1.**—Health care expenditures as a share of gross national product (GNP), by country, 1970-80

Country	Health care expenditures as share of GNP (in percents)			Percentage change in shares of GNP		
	1970	1975	1980	1970-80	1970-75	1975-80
Canada .....	7.1	7.1	7.4	4.2	0	4.2
Federal Republic of Germany.....	6.1	9.7	9.6	57.4	59.0	-1.0
France.....	6.6	8.1	8.8	33.3	22.7	8.6
Netherlands .....	6.3	8.6	9.1	44.4	36.5	5.8
Sweden.....	7.5	8.4	9.4	25.3	12.0	11.9
United Kingdom.....	4.9	5.6	5.8	18.4	14.3	3.6
United States.....	7.4	8.3	9.1	23.0	12.2	9.6
Average.....	6.6	8.0	8.5	28.9	21.2	6.2

**Table 2.—Percentage increase in consumer price index, wage index, and health care expenditures, by country, 1970-80, 1970-75, and 1975-80**

Year	United Kingdom	France	Sweden	United States	Canada	Netherlands	Federal Republic of Germany	Average
Consumer price index								
1970-80 .....	261.0	150.6	141.5	112.3	116.9	102.8	64.2	135.6
1970-75 .....	84.5	52.6	46.6	38.6	42.5	51.1	34.7	50.1
1975-80 .....	95.7	64.2	64.7	53.1	52.2	34.2	22.0	55.2
Wage index								
1970-80 .....	323.7	314.9	189.9	116.9	171.0	156.4	114.6	198.2
1970-75 .....	112.0	102.1	69.3	44.0	67.4	89.7	58.6	77.6
1975-80 .....	100.0	103.2	71.2	50.6	61.8	35.1	35.6	65.4
Health care expenditures								
1970-80 .....	424.0	370.7	280.7	233.3	254.0	317.8	245.8	305.04
1970-75 .....	133.5	127.1	97.2	77.6	93.0	148.0	142.1	116.9
1975-80 .....	121.7	107.2	93.0	87.6	84.0	69.5	42.8	86.5
Adjusted for—								
Consumer price index:								
1970-80 .....	45.2	81.9	57.6	57.0	63.2	106.0	110.5	75.3
1970-75 .....	26.5	48.8	34.5	28.1	35.4	64.1	79.7	45.3
1975-80 .....	13.3	26.2	17.2	22.5	20.9	26.3	17.0	20.5
Wage index:								
1970-80 .....	23.7	13.4	31.3	53.6	30.6	62.9	61.1	40.0
1970-75 .....	10.1	12.4	16.5	23.3	15.3	30.7	52.6	23.0
1975-80 .....	10.9	2.0	12.7	24.6	13.7	25.4	5.5	13.5