



# **Multinational Comparisons of Health Care**

**Expenditures, Coverage, and Outcomes**

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# **I. Overview**

## Overview

International comparisons of health care systems offer valuable tools to policymakers wishing to evaluate the performance of their own systems. The data can suggest in what aspects a country is doing well or poorly, or is simply making different choices relative to other countries.

In this chart book, we present data comparing the health care systems and their performance in eight industrialized countries—Australia, Canada, France, Germany, Japan, New Zealand, the United Kingdom, and the United States—and the median of all 29 members of the Organization for Economic Cooperation and Development (OECD).<sup>1</sup> We compare the performance of each country's health system among four dimensions: health expenditures, insurance coverage, financing and delivery, and outcomes. The data were obtained from *OECD Health Data 98* and subsequent updates. We also briefly summarize the health care financing and delivery systems in all eight countries.

Every effort has been made to

standardize the comparisons, but countries inevitably differ in their definitions of terms. In addition, some of the numbers are preliminary estimates. Wherever possible, we have used the most recent year with relatively complete data; however, data from earlier years may be substituted when the most recent data are not available for a specific country. The comparisons should therefore be seen as guides to relative orders of magnitude rather than as indicators of precise difference.

### EXPENDITURES

In 1997, per capita spending on all health care services ranged from a high of \$4,090 in the United States to a low of \$1,347 in the United Kingdom.<sup>2,3,4</sup> The median for all 29 OECD countries was \$1,747.<sup>5</sup> The United States was the clear outlier: its per capita health care expenditures were more than double the OECD median and 75 percent greater than Germany's, the country with the second highest level of per capita expenditures. All expenditures were adjusted to U.S. dollars using purchasing power parities, a common method of adjusting for cost-of-living differences.<sup>6</sup>

While per capita health care expenditures were much higher in the United States, the annual rate of increase from 1960 to 1997 was similar to that of the OECD median. In the United States, spending increased at an average annual rate of 9.4 percent from 1960 to 1997,<sup>7</sup> compared with 9.2 percent in the median OECD country. The country with the most rapid average annual rate of increase during this period was Japan (12.0 percent), and New Zealand had the smallest increase (7.5 percent).

Recent trends show that the rate of increase in health care spending was slower in nearly all countries in the 1990s than it had been in the 1960s, 1970s, and 1980s. In the period from 1990 to 1997, Germany and Japan had the most rapid average annual increases in annual health expenditures per capita (9.0 and 7.0 percent, respectively). The United States had the third highest average annual increase (5.6%), and Canada had the lowest (3.1%).

### Expenditures as a Percentage of GDP

Health expenditures as a percentage of the



gross domestic product (GDP) measure the proportion of all resources devoted to health care.<sup>8</sup> Other potential uses of GDP funds include housing, food, education, national defense, entertainment, and transportation. In 1997, the percentage of the GDP spent on health care ranged from 13.6 percent in the United States<sup>9</sup> to 6.7 percent in the United Kingdom. The OECD median was 7.6 percent. The United States spent a much greater proportion of its resources on health care than any other country. The country with the second highest share was Germany, which spent 10.4 percent of its GDP on health care.

Since 1960, all countries have devoted an increasing percentage of their resources to health care, despite numerous cost containment efforts. The United States experienced the highest total increase: its 5.2 percent of GDP devoted to health services in 1960 rose to 13.6 percent in 1997, an increase of 8.4 percentage points. During this same period, the percentage spent on health care in the median OECD country increased by 3.7 percentage points, from 3.9 percent to 7.6 percent. The United Kingdom had the smallest total increase, from 3.9 to 6.7 percent, or only 2.8 percentage points.

Despite managed care and other public and private initiatives, the percentage of GDP spent on health care increased by 1.0 percentage point in the United States from 1990 to 1997. In comparison, the increase during this time period was more rapid in Germany and Japan, the same in France, and slower in Australia, New Zealand, and the United Kingdom. The percentage of GDP spent on health care actually declined in Canada during this period.

Countries allocate their spending on health care services in different ways. In 1996, the median OECD country spent 42.7 percent on hospitals, 17.1 percent on physicians,<sup>10</sup> and 15.2 percent on pharmaceuticals. The remainder was spent on multiple health care services, including nursing homes, dentists, and durable medical equipment, as well as biomedical research and development. Compared with the OECD median, the United States spent a greater percentage on physicians, a smaller percentage on pharmaceuticals, and approximately the same on hospitals.<sup>11</sup> Among seven countries in 1996 (all except Japan),<sup>12</sup> the United States spent the largest percentage of total health spending on physician services and the least on

pharmaceuticals.<sup>13</sup> New Zealand spent the largest percentage on hospitals and the least on physician services, while France spent the most on pharmaceuticals and the least on physicians.

### **INSURANCE COVERAGE**

Since 1970, six of the eight countries have assured that their citizens have universal health insurance coverage through government action. Germany and the United States are the two that do not assure universal coverage. Germany does not require its most affluent citizens to purchase health insurance coverage, although nearly all of them do so. In the United States, only 32.9 percent of the population—those covered by Medicare, Medicaid, the Indian Health Service, government civil service, or the military—had government-assured health insurance coverage in 1995. Of the eight countries, only the United States has more than 1 percent of its population uninsured. Sixteen percent of the U.S. population was uncovered by health insurance in 1996.<sup>14</sup>

### **FINANCING AND DELIVERY**

The eight countries use their hospitals in very different ways. In 1995, the United States had the fewest days per capita spent in the

hospital; in fact, the OECD median was almost twice the number of hospital days per capita.

In Japan, less than one in 10 persons was admitted to the hospital in 1995; however, the average length of stay was 43.7 days in 1996. The presence of relatively few long-term care beds is partially responsible for the long average length of stay in Japan. In the United States, one in eight persons was admitted to the hospital in 1996, with an average length of stay of 7.8 days. In France and Germany, more than one in five persons was admitted to the hospital, with an average length of stay of 11.2 and 14.3 days, respectively. The average length of stay was shortest in New Zealand, at 6.5 days.<sup>15,16</sup>

Two indicators of the intensity of services provided during the hospital stay are cost per day and personnel per bed. The United States' cost per day was 5 times the OECD median in 1996 and 2.3 times greater than Canada's, the country with the second highest cost per day. The United States also had the most hospital employees per bed in 1994, more than double the OECD median.<sup>17</sup>

The diffusion of medical technology

occurs at different rates across the eight countries. The two countries that offer the greatest access to high technology services, such as magnetic resonance imagers and CT scanners, are Japan and the United States. In 1996, Canada had the fewest number of magnetic resonance imagers per capita, and the United Kingdom had the fewest CT scanners per capita.

With the exception of Japan, the number of physician visits per capita was similar among the countries, averaging 5 to 7 visits per person per year. In Japan, the average was almost 16 physician visits per person. We found somewhat greater variation in the number of physicians per capita: in 1996, Germany had 3.4 physicians per 1,000 people, the United States had 2.6, and the United Kingdom had 1.6.<sup>18</sup> The median was 2.7.

We also found significant differences in average physician incomes.<sup>19,20,21,22,23</sup> In 1991, physician incomes in the United States were the highest (\$171,000) by a wide margin. Physicians in Germany had the second highest average incomes (\$101,640 in 1992). In Australia, France, and the United Kingdom, physicians earned on average less

than \$70,000 in 1991. By 1996, average physician incomes in the United States had increased to \$199,000.

In six countries where data are available on average physician incomes over an extended period of time, we found that physician incomes had risen slightly faster than inflation in most countries.<sup>24</sup> The United States had the greatest inflation-adjusted increase in physician incomes during the period from 1960 to 1996. Inflation-adjusted incomes for physicians actually declined in Australia during this period.

In dollar terms, France and Japan spent the most per capita on pharmaceuticals and New Zealand spent the least.<sup>25,26</sup> France spent the highest percentage of the health care dollar on pharmaceuticals, while the United States spent the smallest. Because of its large per capita health expenditures, however, the United States spent the third most per capita on pharmaceuticals.

Health care expenditures are expected to increase to some extent as the post-World War II generation approaches age 65. Individuals over age 65 are 3 to 5 times more expensive to care for per capita than

individuals under age 65. In 1996, the percentage of the population that was over age 65 ranged from a high of 15.6 percent in the United Kingdom and Germany to a low of 11.3 percent in New Zealand. The elderly population in the United States—12.7 percent of the total—was below the OECD median of 13.9 percent.

The aging of the population will have a major influence on nursing homes. Canada had 8.1 nursing home beds per 1,000 persons in 1995, followed by the United States at 6.7 beds per 1,000 persons. In contrast, Japan had only 0.8.<sup>27</sup> In France, Germany, and the United Kingdom, the number of nursing home beds increased substantially from 1980 to 1995. In Australia, Canada, and the United States, the number remained stable or declined. The United States had more nursing home beds per capita than most other industrialized countries in 1995.

## **OUTCOMES**

Measuring health outcomes is extremely difficult—all the widely available indicators are crude proxies and are not very sensitive to changes in health care financing and delivery. More research and data collection are necessary before health care outcomes can be

compared meaningfully and be used to measure the performance of health care systems. However, a number of commonly used public health measures, including life expectancy, infant mortality, and premature deaths, show some interesting trends.

In the OECD countries, men lived an average of 7.0 fewer years than women. In 1996, Japan had the longest life expectancy at birth for males (77.0 years) and the United States had the shortest (72.7 years). Life expectancy at birth for women ranged from a high of 83.6 years in Japan to a low of 79.3 years in the United Kingdom. Life expectancy for women in the United States was the second lowest, at 79.4 years.

From 1960 to 1996, life expectancy at birth for both men and women increased an average of almost 7 years. The greatest increase occurred in Japan (12.6 years) and the smallest increase occurred in the United Kingdom (5.6 years). The increase in the United States was 6.2 years.

Infant mortality rates also show some interesting trends. In 1996, the United States had the highest infant mortality rate (7.8 per 1,000 live births), while Japan had the lowest

(3.8 per 1,000 live births).<sup>28</sup> All eight countries showed significant reductions in infant mortality during this time period, with Germany showing the greatest reduction and Australia the least.

A more sophisticated outcome measure is premature deaths. These are deaths that would have been preventable had appropriate medical knowledge been applied and known public health principles been enforced, or had risky behavior been less prevalent.<sup>29</sup> The United States had the most preventable deaths per 100,000 people and Japan had the least.

## **IMPLICATIONS FOR THE UNITED STATES**

Per capita health spending in the United States was more than double that of most industrialized countries. The United States also spent a much greater proportion of total spending on health care services, thereby leaving fewer resources available for other goods and services.

International comparisons suggest two areas that are partially responsible for the higher spending in the United States: hospital costs per day and average physician incomes.

The former was five times the OECD median, and latter was two to three times larger than other industrialized countries. The United States already had the fewest number of hospital days per capita and an average number of physicians and physician visits, suggesting that continued emphasis on controlling utilization may not be warranted.

The United States is a clear outlier in insurance coverage. While the other seven countries have achieved nearly universal health insurance coverage, approximately 16 percent of the United States population was uninsured in 1996.

On two widely used outcomes measures—longevity and infant mortality—the United States was consistently at or near the bottom among the eight countries. Greater attention should be given to factors that will improve these outcomes in the United States

## **II. Health Care Expenditure**

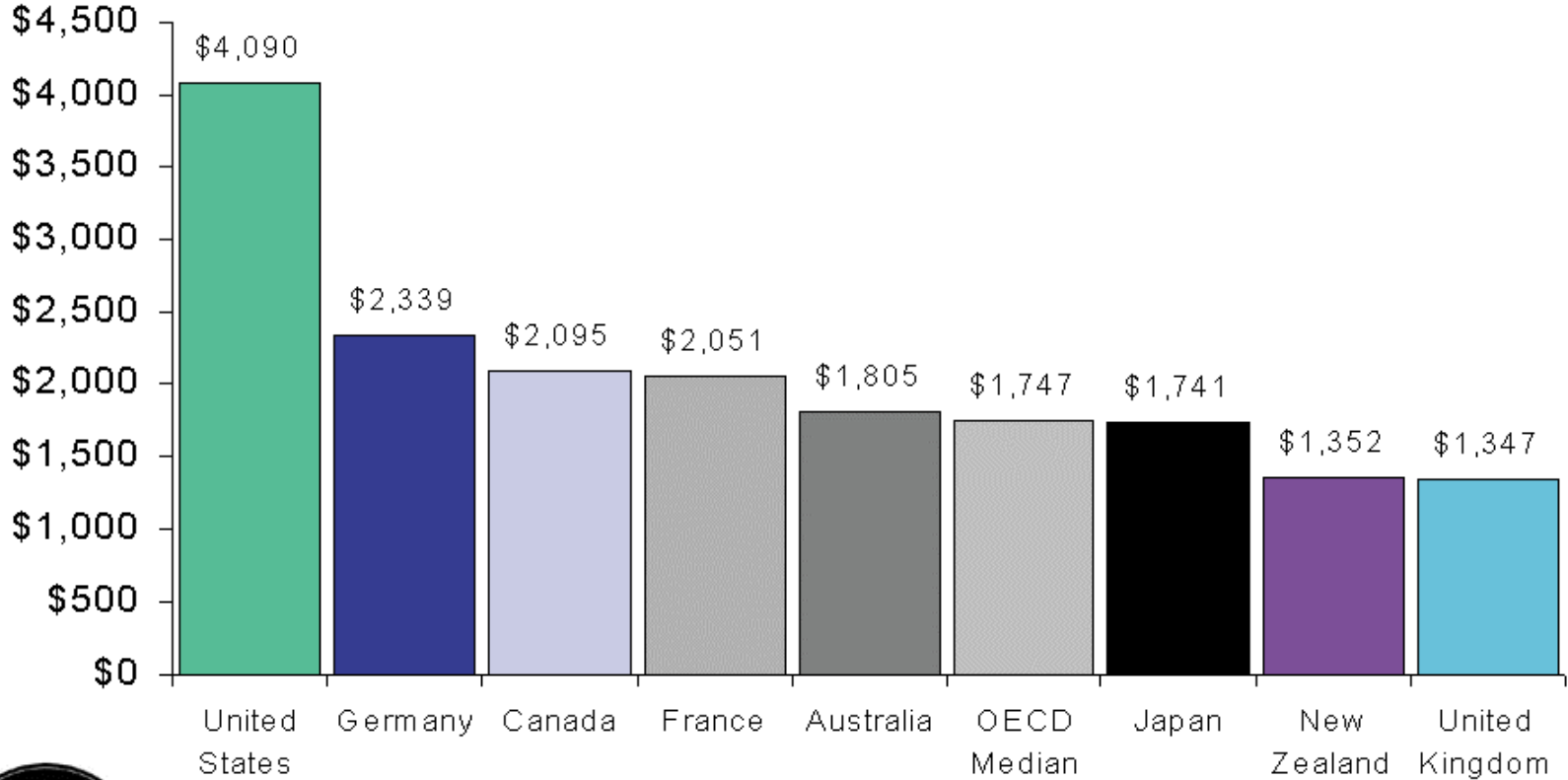
## Chart II-1. Per capita health spending in the United States was more than double the OECD median in 1997.

- The United States spent \$4,090 per capita on health care in 1997.<sup>2,3,4,5</sup>
- Germany had the second highest expenditures per capita, at \$2,339 per year.
- New Zealand and the United Kingdom spent the least per capita, at \$1,352 and \$1,347, respectively.
- The median for all 29 OECD countries was \$1,747 per capita in 1997.<sup>1,6</sup>

**Per Capita Expenditures on Health in 1997  
Compared to the OECD Median  
(OECD Median = \$1,747)**

Country	% Difference	Country	% Difference
United States	+134%	Australia	+3%
Germany	+34%	Japan	+0%
Canada	+20%	New Zealand	-23%
France	+17%	United Kingdom	-23%

**Chart II-1. Health Care Expenditures per Capita,  
Adjusted for Cost-of-Living Differences, 1997**



OECD Health Data 1998

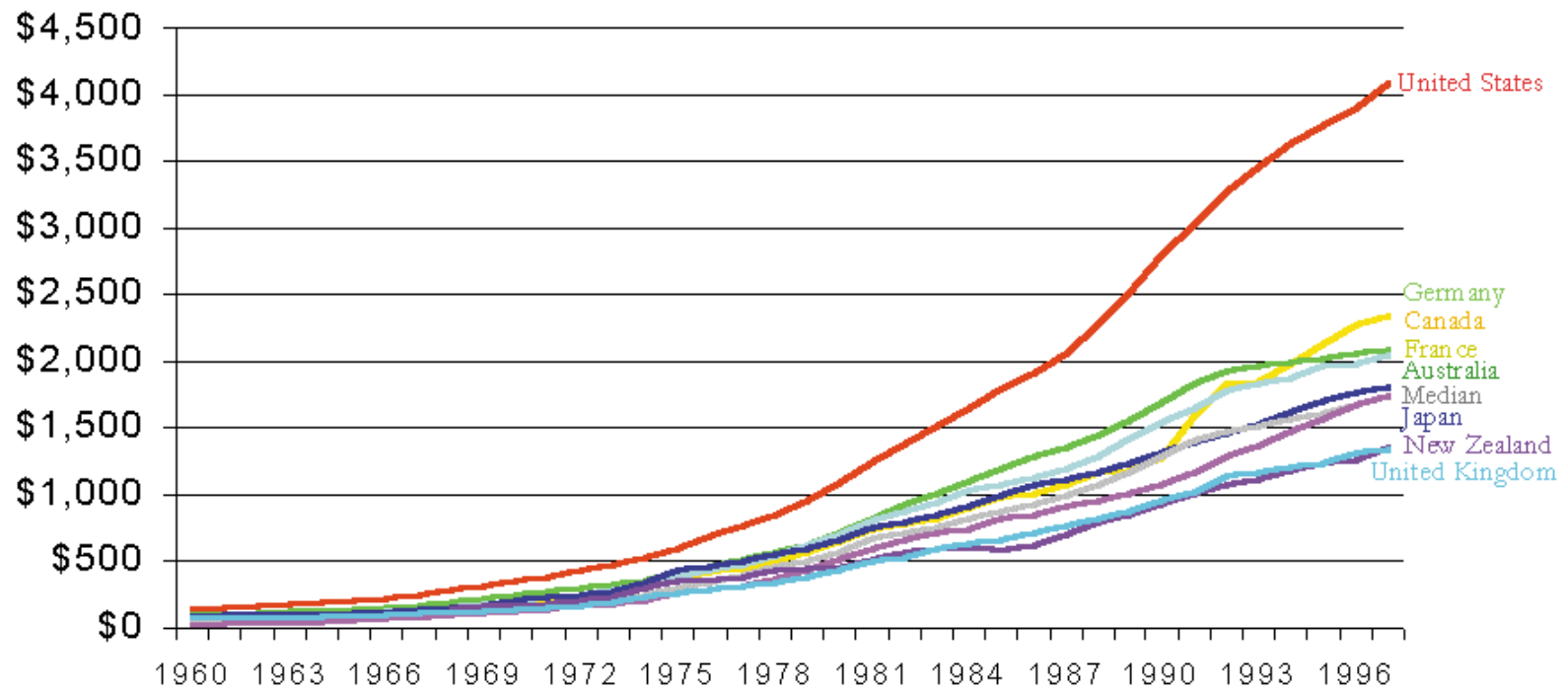
**Chart II-2. The rate of increase in U.S. health spending per capita from 1960 to 1997 was similar to the OECD median.**

- In the United States, health care expenditures per capita increased at an average annual rate of 9.4 percent per year between 1960 and 1997.<sup>7</sup>
- The OECD median increase was 9.2 percent per year.
- Japan had the greatest increase—12.0 percent per year.
- New Zealand had the smallest increase—7.5 percent per year.

<b>Country</b>	<b>1960</b>	<b>1997</b>	<b>Average Annual Increase</b>
Japan	\$26	\$1,741	12.0%
Germany	\$68	\$2,339	10.0%
France	\$72	\$2,051	9.5%
United States	\$149	\$4,090	9.4%
OECD Median	\$67	\$1,747	9.2%
Canada	\$103	\$2,095	8.5%
Australia	\$94	\$1,805	8.3%
United Kingdom	\$74	\$1,347	8.2%
New Zealand	\$92	\$1,352	7.5%



## Chart II-2. Health Care Expenditures per Capita, Adjusted for Cost-of-Living Differences, 1960–1997



OECD Health Data 1998



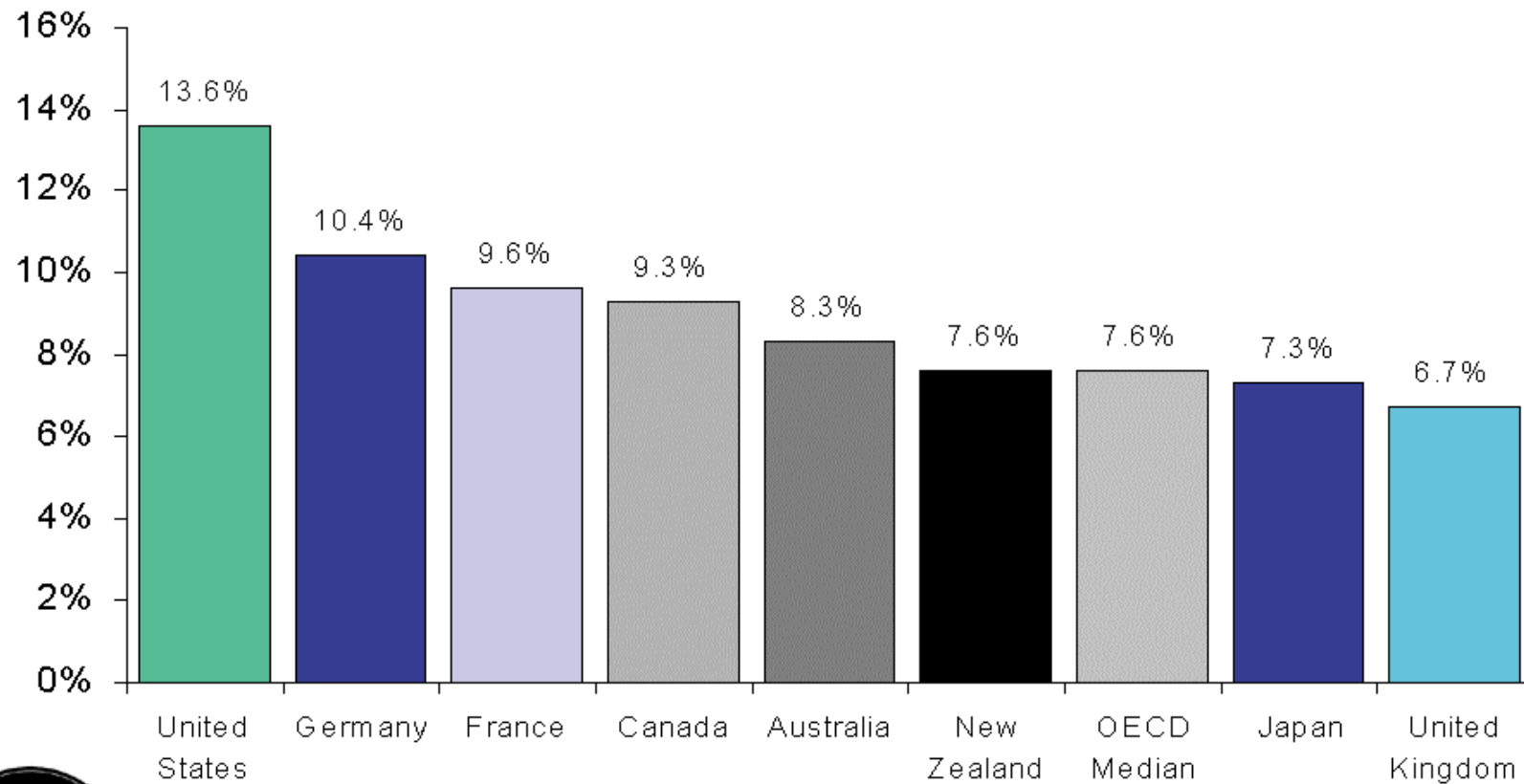
### Chart II-3. The United States spent a much higher proportion of its GDP on health care than other industrialized countries in 1997.

- The United States spent 13.6 percent of its GDP on health care in 1997.<sup>8,9</sup>
- The OECD median was 7.6 percent.
- Germany had the second highest percentage—10.4 percent.

**Absolute Difference from the OECD Median, 1997**  
(OECD Median = 7.6%)

<b>Country</b>	<b>Difference</b>	<b>Country</b>	<b>Difference</b>
United States	+6.0%	Australia	+0.7%
Germany	+2.8%	New Zealand	0%
France	+2.0%	Japan	-0.3%
Canada	+1.7%	United Kingdom	-0.9%

### Chart II-3. Percentage of GDP Spent on Health Care, 1997



OECD Health Data 1998

**Chart II-4. From 1960 to 1997, the United States had the most rapid growth in percentage of total spending on health services.**

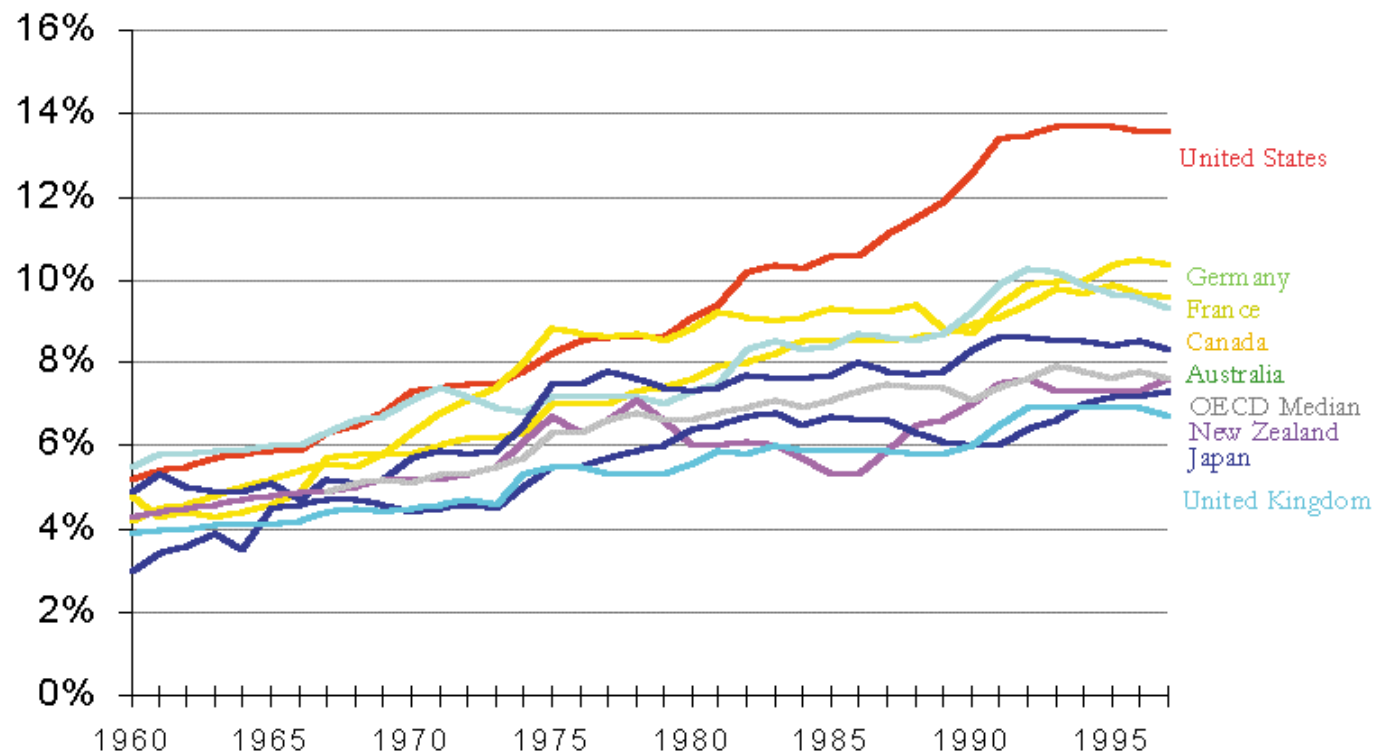
- From 1960 to 1997, the percentage of GDP spent on health care in the United States increased from 5.2 to 13.6 percent, or 8.4 percentage points.
- The OECD median increased from 3.9 to 7.6 percent, or 3.7 percentage points.
- The United Kingdom showed the slowest growth, from 3.9 to 6.7 percent, or 2.8 percentage points.
- Some of the difference is attributable to growth in GDP. For example, from 1960 to 1997, GDP per capita increased by 14 times in the United States and 19 times in Canada.

**Total Health Expenditures as Percentage of GDP**

Country	1960	1997	Percentage Point Change
United States	5.2	13.6	8.4
Germany	4.8	10.4	5.6
France	4.2	9.6	5.4
Japan	3.0	7.3	4.3
Canada	5.5	9.3	3.8
OECD Median	3.9	7.6	3.7
Australia	4.9	8.3	3.4
New Zealand	4.3	7.6	3.3
United Kingdom	3.9	6.7	2.8

OECD Health Data 1998

## Chart II-4. Percentage of GDP Spent on Health Care, 1960–1997



OECD Health Data 1998

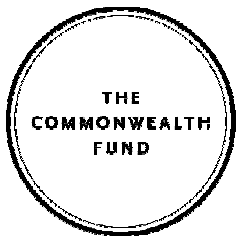
## Chart II-5. Distribution of Health Care Spending, 1996

- Most countries, including the United States, spent from 42 to 46 percent of the health care dollar on hospitals.<sup>11,12</sup>
  - Germany spent the lowest percentage (42.2%).
  - New Zealand spent the highest percentage (59.1% in 1993).
- Most countries spent from 11 to 20 percent on physician services.<sup>10,13</sup>
  - France spent the lowest percentage (11.8%).
  - The United States spent the highest percentage (19.5%).
- Most countries spent from 11 to 17 percent on pharmaceuticals.
  - The United States spent the lowest percentage (8.8%).
  - France spent the highest percentage (17.0%).

## Chart II-5. Distribution of Health Care Spending, 1996

Country	Percentage of Total Spending		
	Hospitals	Physicians	Pharmaceuticals
United States	42.2%	19.5%	8.8%
Canada	44.5%	14.5%	12.5%
Germany	35.0%	16.4%	12.7%
France	45.6%	11.8%	17.0%
Australia	43.2%	18.9% <sup>b</sup>	11.4%
OECD Median	42.7%	17.1% <sup>b</sup>	15.2%
United Kingdom	42.2% <sup>a</sup>	15.2% <sup>b</sup>	16.5%
New Zealand	59.1% <sup>c</sup>	11.9% <sup>c</sup>	15.2%

<sup>a</sup>1995  
<sup>b</sup>1994  
<sup>c</sup>1993





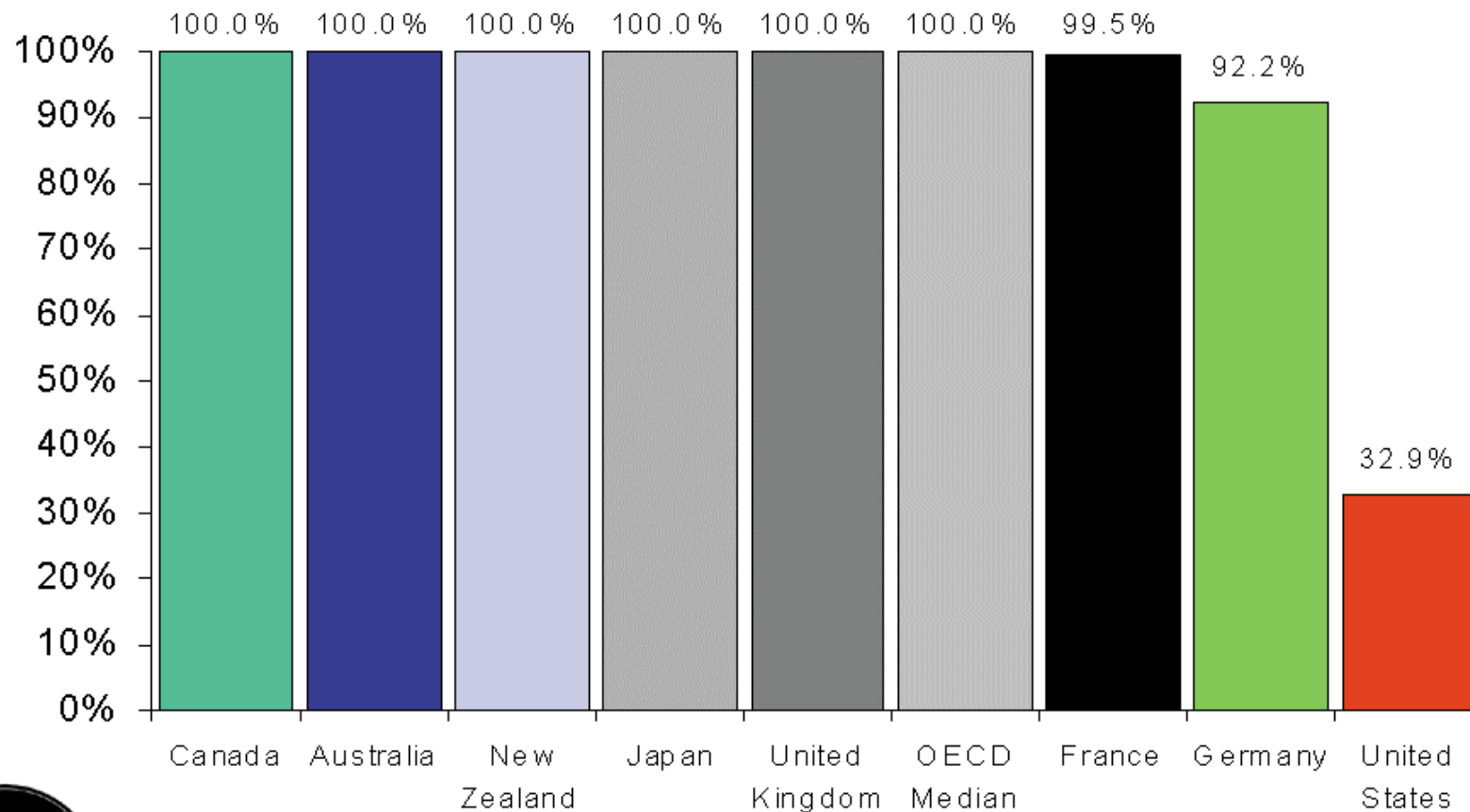


### **III. Health Care Coverage**

### **Chart III-1. In 1996, in most countries, the government assured that people had health insurance coverage.**

- Governments assure that individuals receive health insurance through a variety of methods, including national health insurance and social insurance.
- Australia, Canada, France,<sup>30</sup> Japan, New Zealand, and the United Kingdom had universal health insurance coverage in 1995.
- In Germany, the government does not require the most affluent to purchase health insurance, but nearly all of them do so voluntarily.
- Only 32.9 percent of the U.S. population had health insurance assured by the government through Medicare, Medicaid, the Indian Health Service, government civil service, or the military in 1995. The government did not require the remainder of the population to have health insurance, although many obtained health insurance privately. However, approximately 16% of the U.S. population was without health insurance coverage in 1996.<sup>14</sup>

### Chart III-1. Percentage of Total Population with Government-Assured Insurance, 1995



OECD Health Data 1998

## Chart III-2. Since 1970, only the United States has had large portions of its population uninsured.

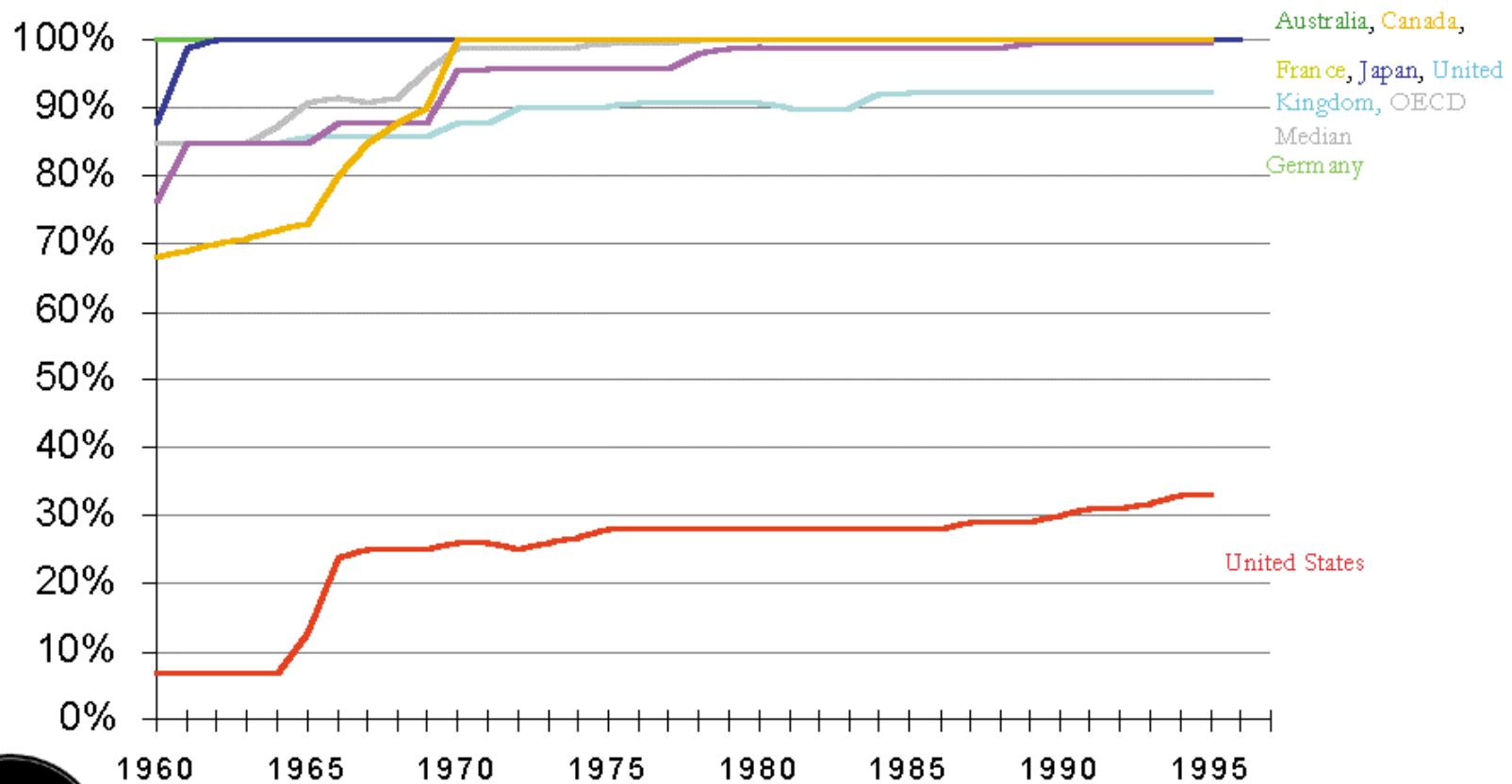
- By 1960, Australia, New Zealand, and the United Kingdom already had achieved universal health insurance coverage.
- By 1970, Japan and Canada had achieved universal health insurance coverage.
- By 1980, France had provided 99.5 percent of the population with health insurance coverage.<sup>30</sup>
- In Germany, health insurance coverage is obtained from a combination of government-mandated and private health insurance. Less than 1 percent of the population does not have health insurance coverage.<sup>31</sup>
- In the United States, the percentage of the population without insurance coverage ranged from 11 to 33 percent during the period 1963–1996.<sup>14</sup>

### Percentage of U.S. Uninsured Population

Year	% Uninsured
1963	33%
1970	24%
1976	11%
1980	13%
1985	15%
1990	14%
1996	16%

OECD Health Data 1998

## Chart III-2. Percentage of Total Population with Government-Assured Health Insurance, 1960–1996



OECD Health Data 1998



## **IV. Health Care Financing and Delivery**

### Chart IV-1. The likelihood of being hospitalized varied greatly across the eight countries.

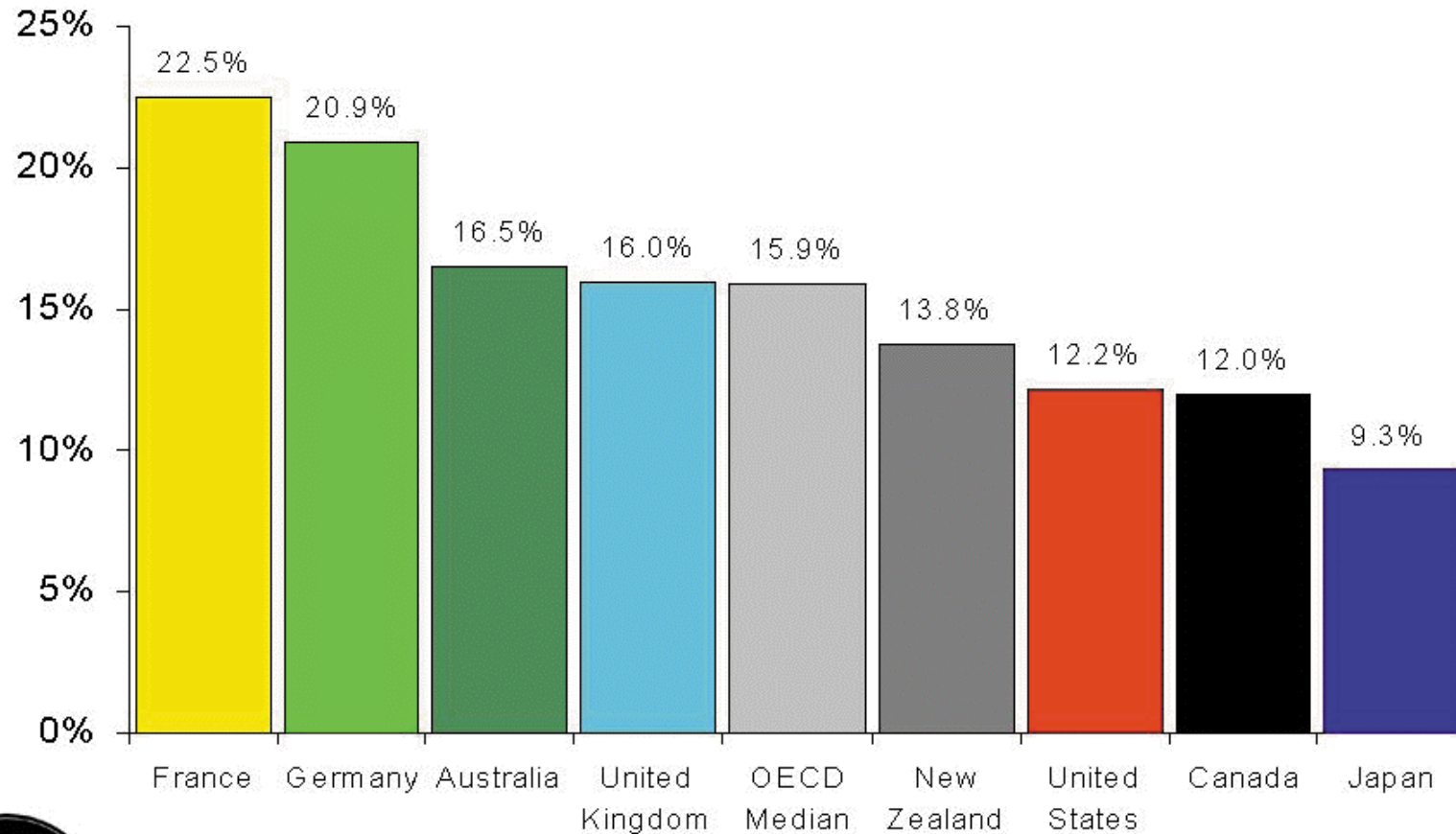
- Admission rates were relatively low in the United States compared to the other countries, with 1 of 8 Americans hospitalized during the year.<sup>16</sup>
- In France and Germany, more than 1 of 5 people were hospitalized during the year. In Japan, less than 1 of 10 people were hospitalized during the year.
- In six of the eight countries, the percentage of the population admitted to the hospital increased from 1960 to 1996. In the United States and Canada, the percentage of the population admitted to the hospital actually declined from 1960 to 1996.<sup>15,32</sup>

<b>Country</b>	<b>% Population Admitted</b>	
	<b>1960</b>	<b>1996</b>
France	6.7 <sup>a</sup>	22.5
Germany	13.3	20.9
United Kingdom	9.1	16.0
New Zealand	7.9	13.8
United States	13.9	12.2
Canada	15.0	12.0
Japan	3.7	9.3

<sup>a</sup>1966



### Chart IV-1. Hospital Inpatient Admission Rates, 1996



OECD Health Data 1998

**Chart IV-2. The average length of stay varied considerably across the eight countries in 1996, with the United States consistently at the low end.**

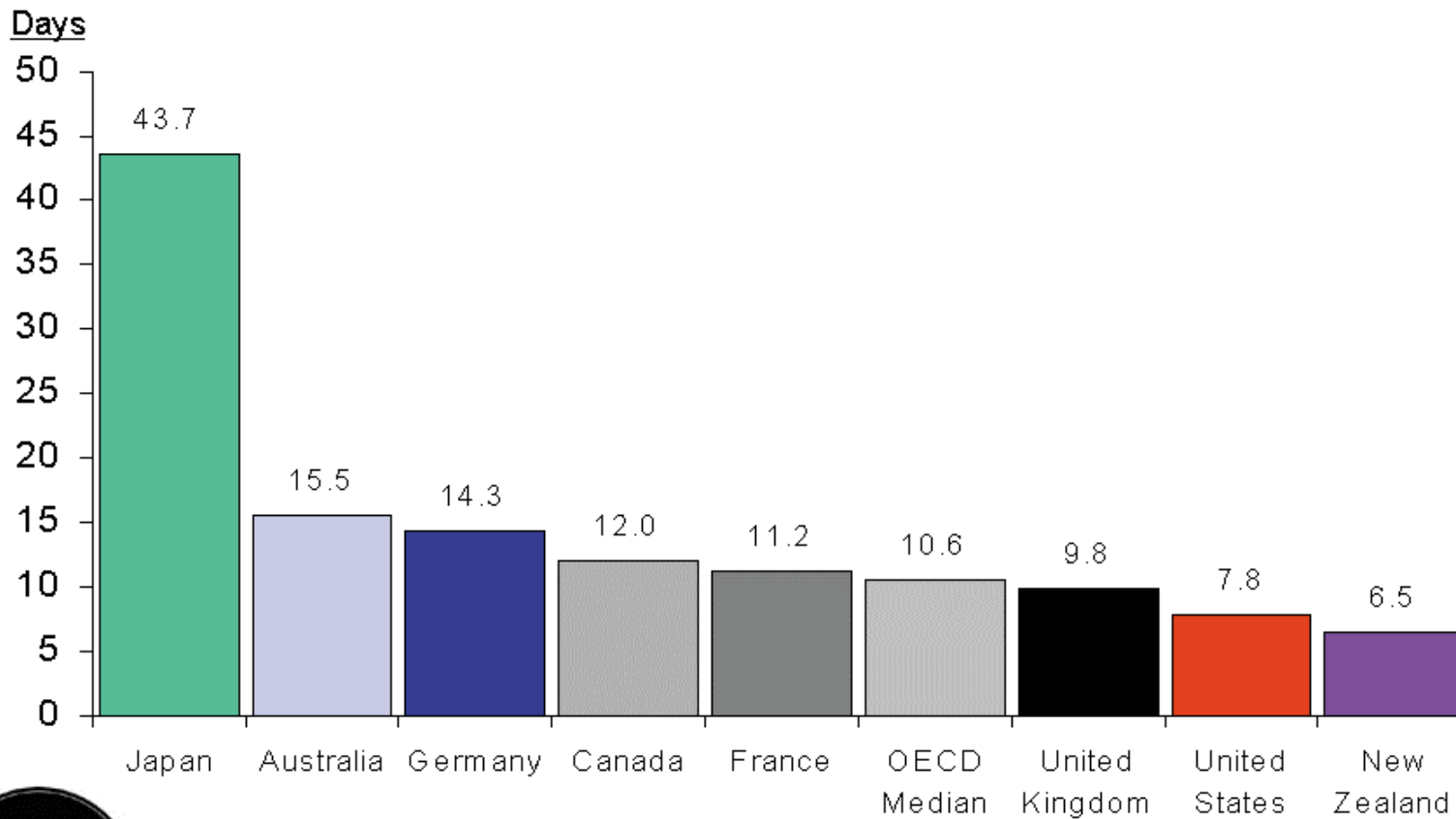
- In the United States, the length of stay for most types of hospitalization is short compared to other countries.
- In Japan, because individuals with long-term care needs are generally hospitalized in acute care hospitals, the average length of stay is much longer than in the other countries.
- The eight countries vary greatly in average length of hospital stay for common procedures such as normal delivery and appendectomy.

**Average Length of Stay for Selected Procedures, 1996**

Normal delivery	Avg. LOS		Appendicitis	Avg. LOS
Japan	6.4		Japan	9.3 <sup>d</sup>
Germany	5.9 <sup>a</sup>		Germany	7.5 <sup>a</sup>
France	5.4		France	5.7
United Kingdom	4.3 <sup>b</sup>		United Kingdom	5.1 <sup>d</sup>
Australia	3.4 <sup>a</sup>		United States	3.8 <sup>a</sup>
New Zealand	2.5		Canada	4.1 <sup>c</sup>
Canada	2.5 <sup>c</sup>		New Zealand	3.6
United States	1.5 <sup>a</sup>		Australia	3.6 <sup>a</sup>

<sup>a</sup>1995  
<sup>b</sup>1985  
<sup>c</sup>1994  
<sup>d</sup>1993

### Chart IV-2. Average Length of Hospital Stay for All Diagnoses, 1996

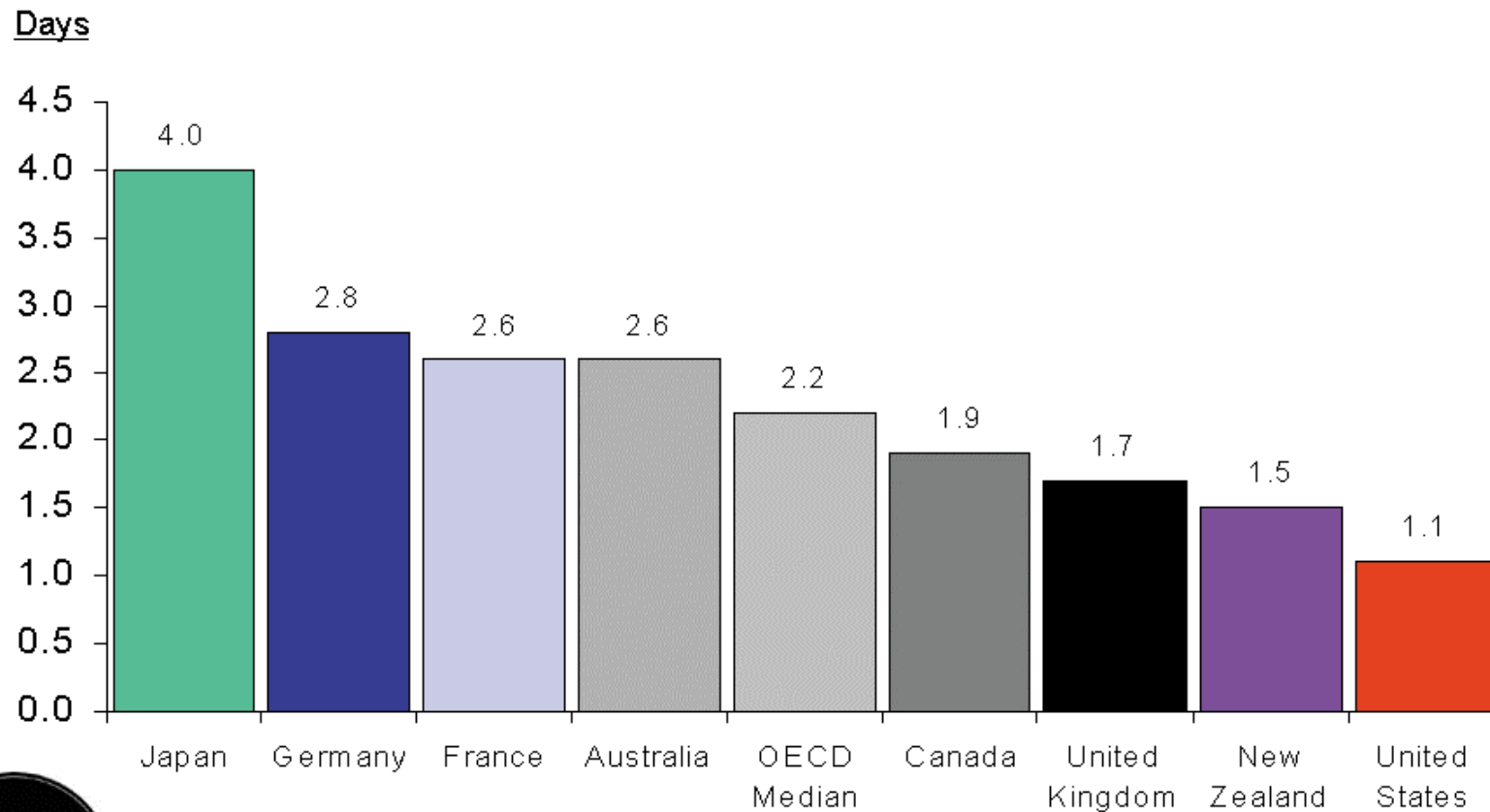


OECD Health Data 1998

**Chart IV-3. The number of inpatient days per capita varied greatly among the eight countries in 1996, with the United States having the fewest.**

- The United States had the fewest hospital days per capita in 1996.
- The median OECD country had twice as many hospital days as the United States.
- Japan had the highest number of hospital days—almost four times as many as the United States, primarily because of the long average length of stay in Japan.

### Chart IV-3. Hospital Inpatient Days per Capita, 1996

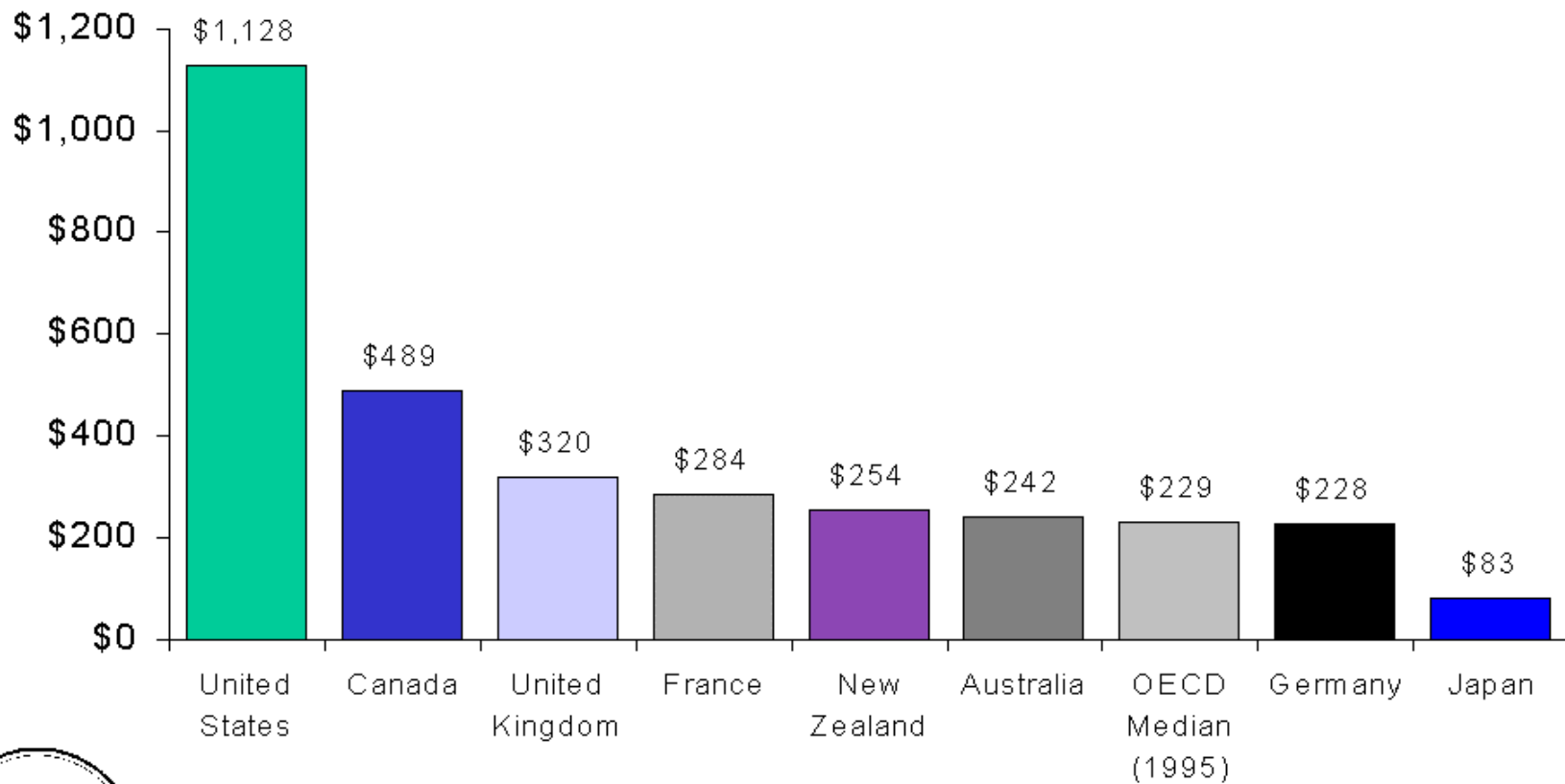


OECD Health Data 1998

**Chart IV-4. The United States had considerably higher hospital costs per day than other industrialized countries in 1996.**

- Hospital costs per day in the United States were \$1,128 in 1996. This is 2.3 times as high as in Canada—the country with the second highest costs—and almost five times the OECD median (\$229 in 1995).
- Japan had the lowest per-day hospital costs at \$83; however, many long-term care days are included.

### Chart IV-4. Hospital Costs per Day, 1996



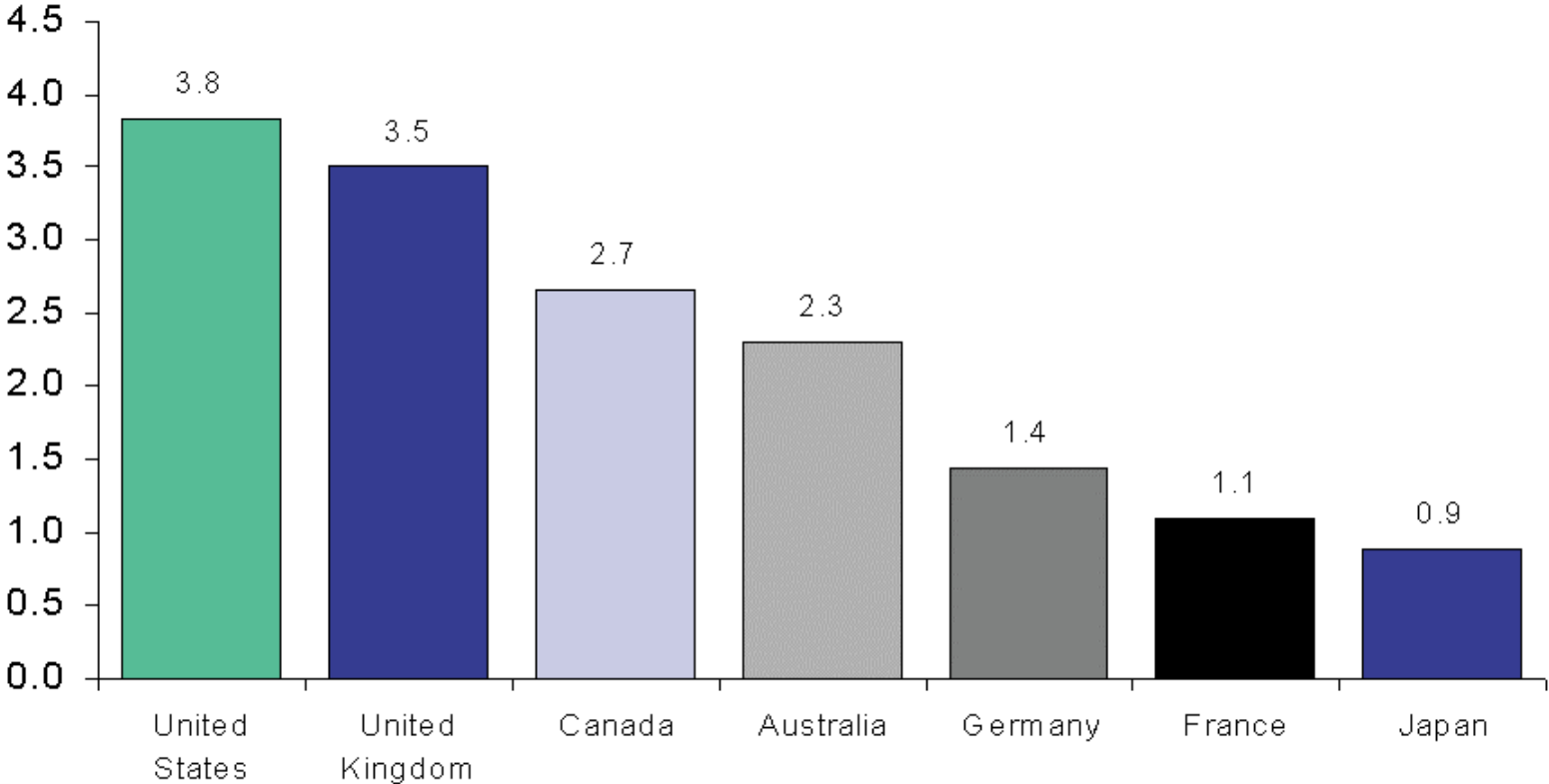
OECD Health Data 1998

## **Chart IV-5. The United States had the most acute care hospital staff per bed in 1996.**

- The largest proportion of spending in most hospitals is for personnel.
- The United States had the most hospital personnel per bed—almost four employees per bed.<sup>17</sup>
- The United Kingdom had the second most hospital personnel per bed—3.5 employees per bed.
- Japan had the fewest hospital personnel per bed—0.9.



**Chart IV-5. Acute Care Hospital Staff per Bed, 1994**



OECD Health Data 1998

## Chart IV-6. The Japanese and Americans had much greater access to certain types of medical technology than people in other countries in 1996.

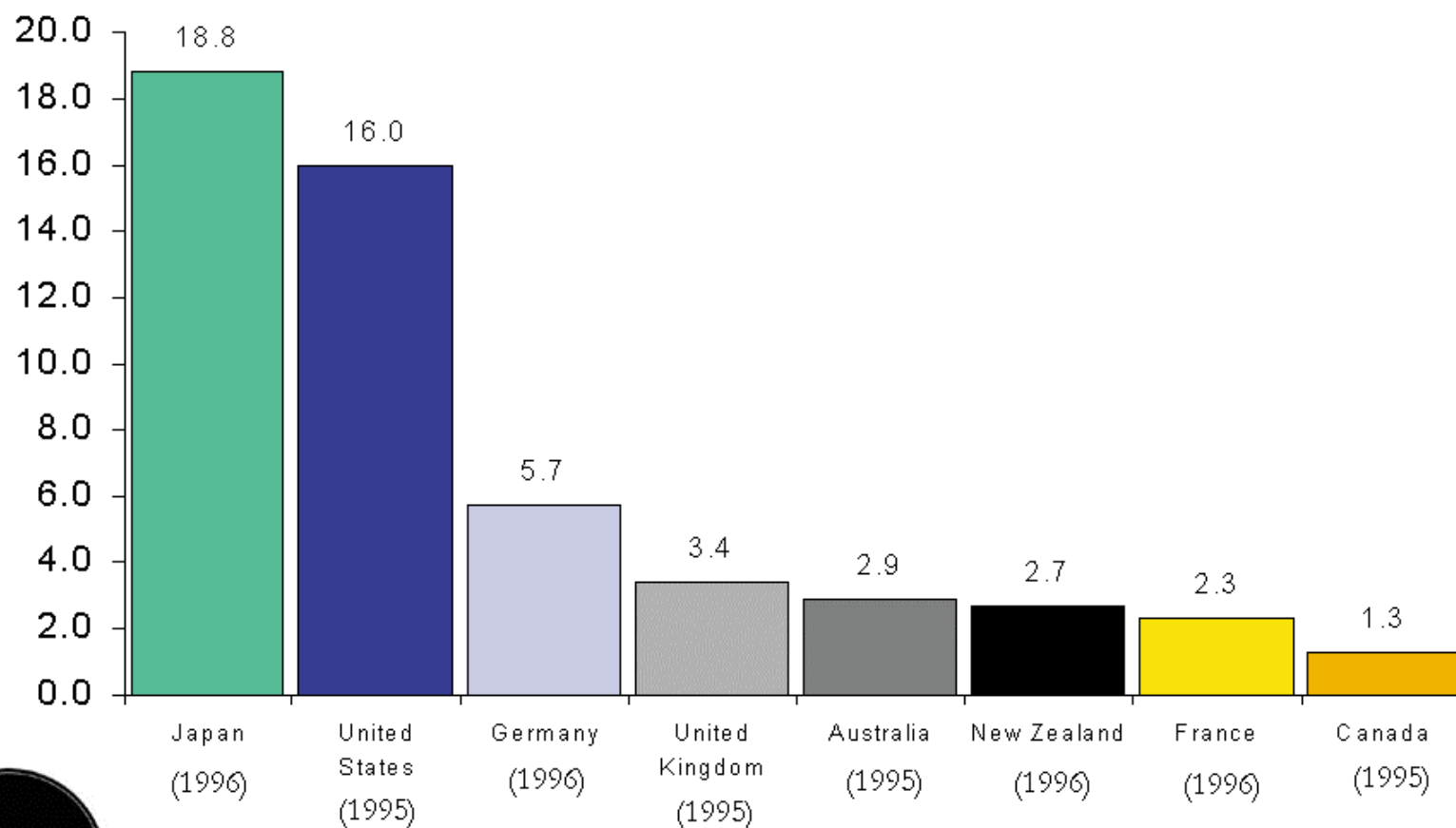
- In the United States, estimates indicate that medical technology contributes as much as 50 percent to the annual increase in health care spending.<sup>33</sup>
- Japan and the United States have more magnetic resonance imagers and CT scanners per capita than other industrialized countries.
- Compared to Canada, the United States has 12 times more MRIs per capita and 3 times more scanners per capita.

<b>Country</b>	<b>CT Scanners per 1,000,000 pop.</b>
Japan	69.7
United States	26.9 <sup>a</sup>
Australia	18.4 <sup>b</sup>
Germany	16.4
France	9.4
Canada	7.9 <sup>c</sup>
New Zealand	7.7
United Kingdom	6.3 <sup>a</sup>

a1993  
 b1994  
 c1995

OECD Health Data 1998

### Chart IV-6. Magnetic Resonance Imagers per Million People, 1995 or 1996

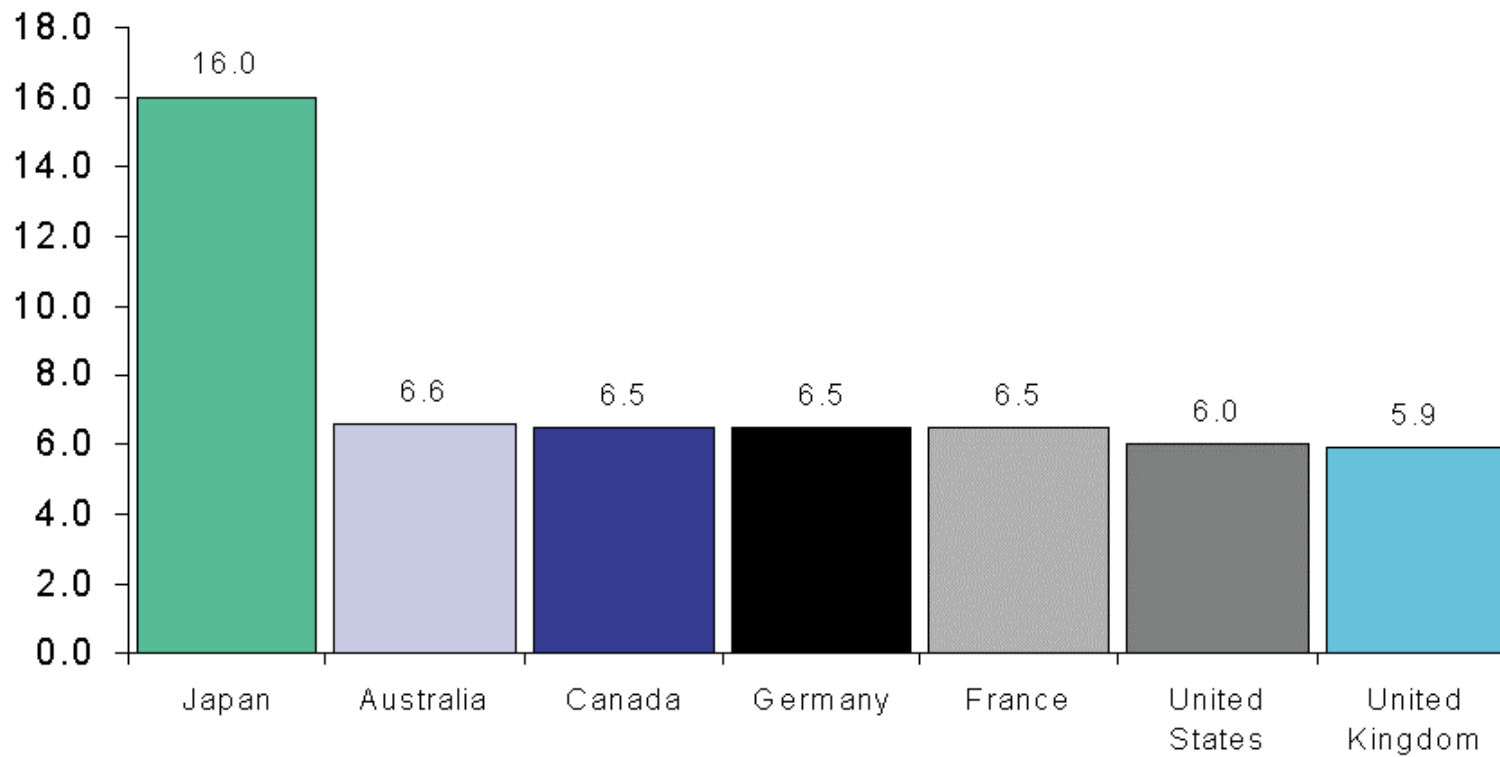


OECD Health Data 1998

## **Chart IV-7. In most countries, per capita visits to a physician averaged six per year.**

- The number of physician services per capita is similar across all eight countries except for Japan.<sup>18,34</sup>
- Japan had 16.0 visits per capita in 1996.
- In Japan, the dispensing of pharmaceuticals is most commonly done in the doctor's office and is counted as a physician visit.
- The United States had approximately the same number of physician visits per capita as most industrialized countries in 1996.

### Chart IV-7. Physician Visits per Capita, 1996

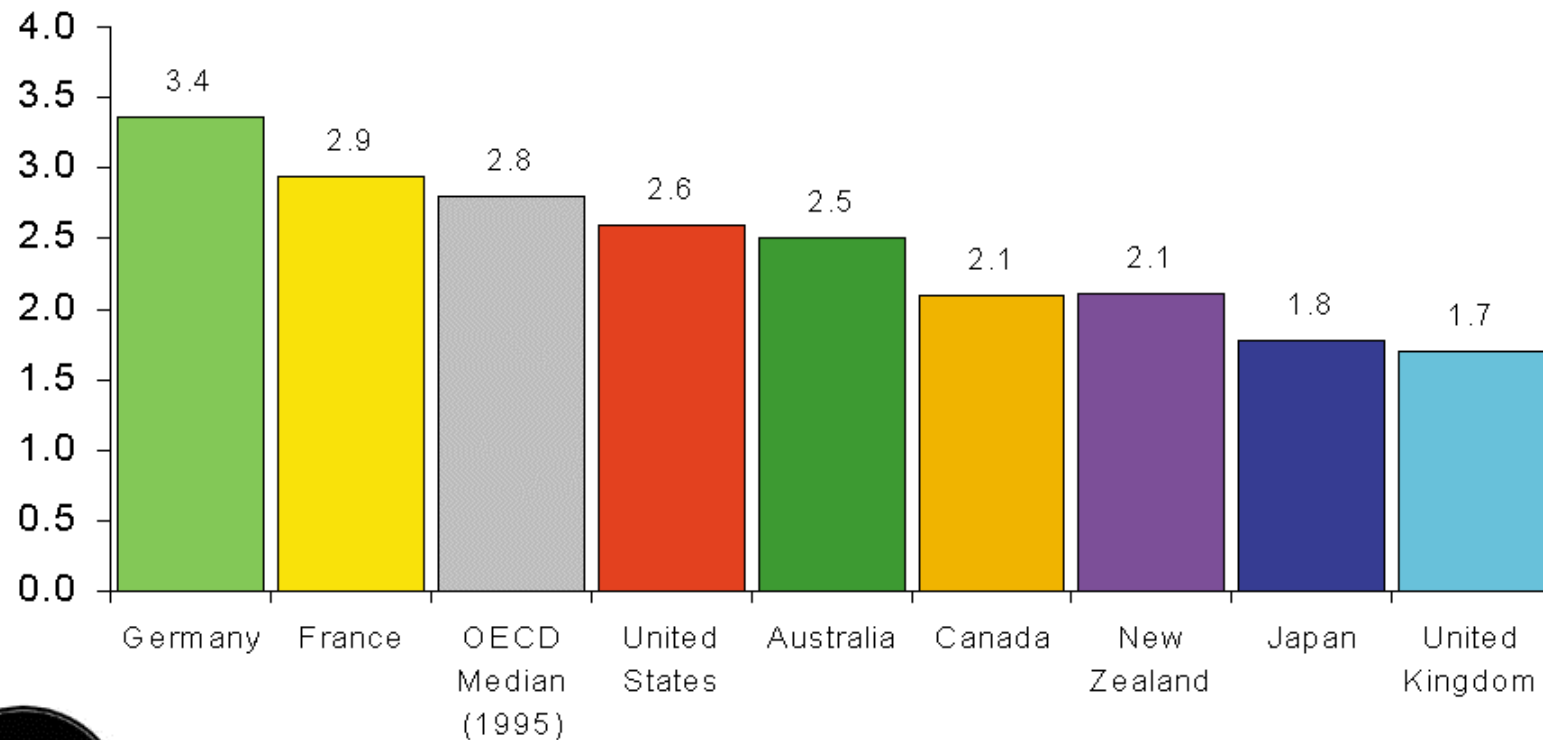


OECD Health Data 1998

## **Chart IV-8. The United States had an average physicians-to-population ratio in 1996.**

- The United States had an average of 2.6 physicians per 1,000 population in 1996, or one physician for every 385 persons.<sup>35</sup>
- The OECD median was 2.8 physicians per 1,000 people in 1995, or one physician for every 357 people.
- In 1996, the United States had slightly fewer physicians per capita than the OECD median.
- Germany had the most physicians per capita in 1996—3.4 per 1,000 people, or one physician for every 294 people.
- The United Kingdom had the fewest physicians per capita in 1996—1.7 per 1,000 people, or one physician for every 588 people.

### Chart IV-8. Number of Practicing Physicians per 1,000 People, 1996



OECD Health Data 1998

**Chart IV-9. In 1991, physicians in the United States earned on average substantially more after expenses were excluded than physicians in other countries.**

- In 1991, physicians in the United States earned almost twice as much as those in Germany and Canada and about three times as much as those in Australia, France, and the United Kingdom.<sup>19,20,21,22,23</sup>
- After adjusting for inflation, physician incomes increased most rapidly in the United States between 1965 and 1991.<sup>24</sup>

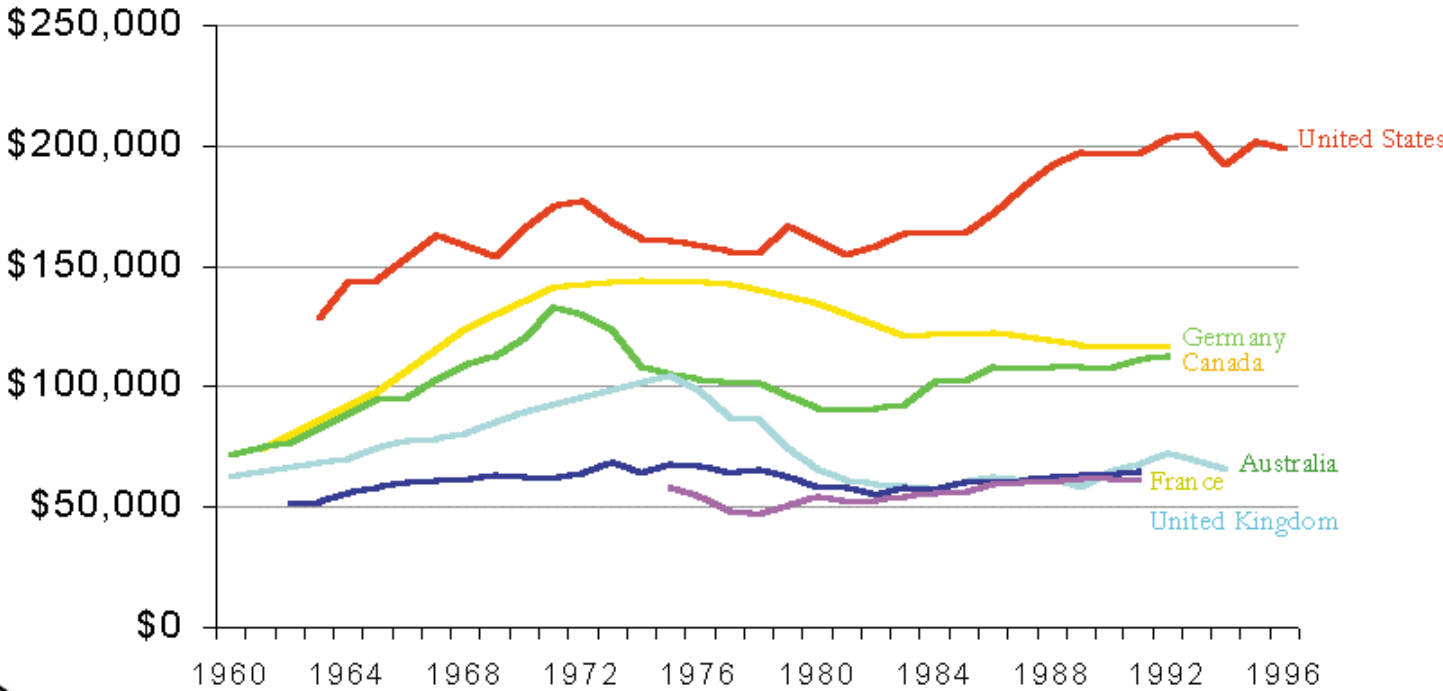
**Average Physician**

Country	1965	1965 Income in 1991 Dollars	1991
United States	\$28,960	\$125,218	\$171,000
Germany	\$19,680	\$85,006	\$101,640 <sup>a</sup>
Canada	\$19,021	\$82,243	\$96,512
Australia	\$15,070	\$65,160	\$59,340
France	\$11,782	\$50,943	\$56,524
United Kingdom	n/a	n/a	\$53,381

<sup>a</sup>1992



### Chart IV-9. Physician Mean Income, Adjusted for Cost-of-Living Differences and Inflation, 1960–1996



OECD Health Data 1998

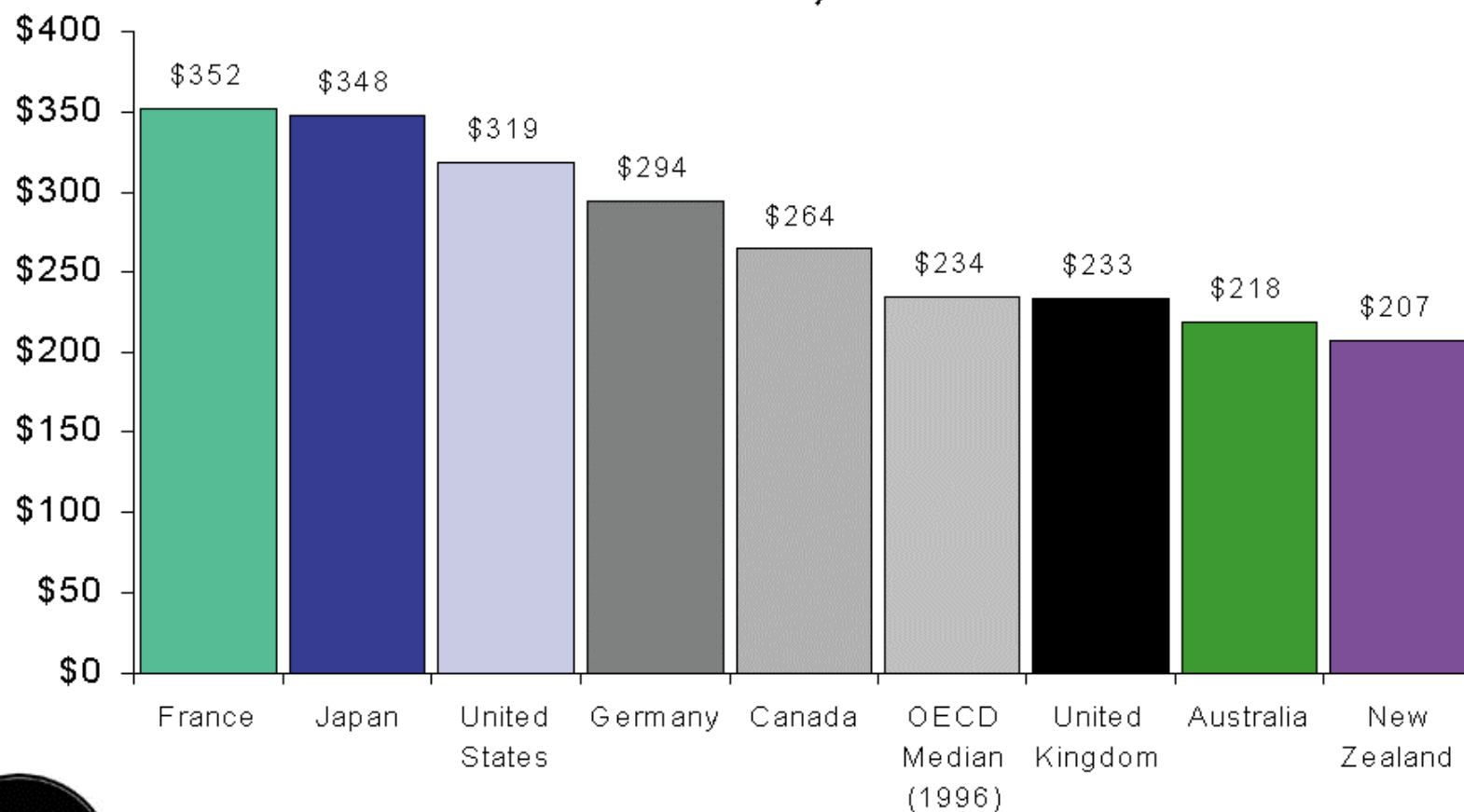
## Chart IV-10. The eight countries spent different amounts on pharmaceuticals in 1997.

- In 1997, the United States spent the lowest percentage of the health care dollar on pharmaceuticals (7.8%) and Japan the highest (20.0%). However, they both spent approximately the same dollar amount per capita on pharmaceuticals.
- The percentage of health resources spent on pharmaceuticals varies considerably. The OECD median was 15.2% in 1996.<sup>25,26</sup>

### Percentage of Health Expenditures on Pharmaceuticals, 1997

Country	Percent
Japan	20.0%
United Kingdom	17.3%
France	16.7%
New Zealand	15.3%
OECD Median (1996)	15.2%
Canada	12.6%
Germany	12.6%
Australia	12.1%
United States	7.8%

### Chart IV-10. Per Capita Expenditures on Pharmaceuticals, Adjusted for Cost-of-Living Differences, 1997



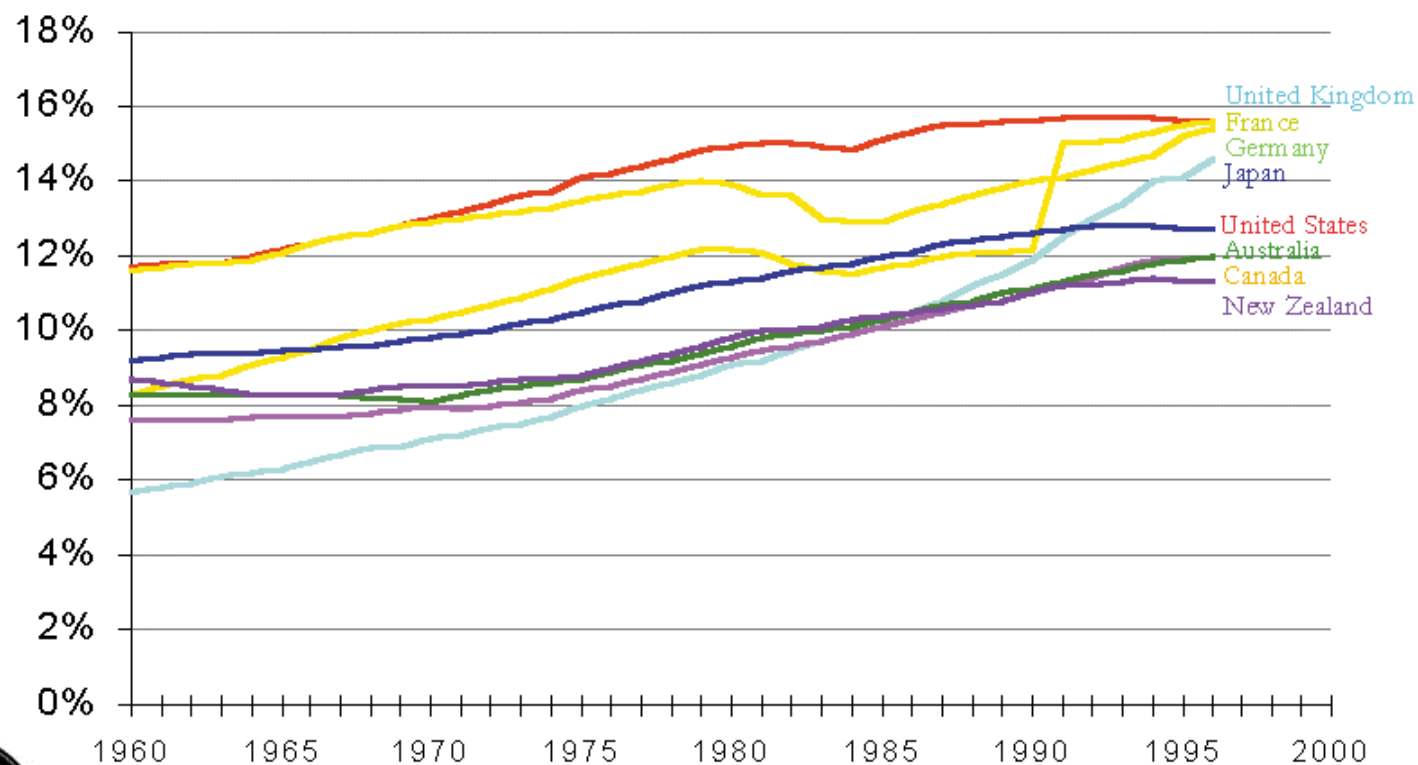
OECD Health Data 1998

## Chart IV-11. All eight countries had aging populations in 1996.

- The percentage of the population age 65 and over increased in all eight countries from a median of 8.3 percent in 1960 to 12.7 percent in 1996.
- The aging of the U.S. population was similar to other countries, though the proportion of individuals age 65 and over in 1996 was slightly lower than the OECD median.
- Given that people age 65 and over are about three to five times more expensive to care for than people under age 65, the aging of the population could have some impact on health expenditures.<sup>37</sup>
- The percentage of the population over age 65 increased dramatically in Germany following unification.

<b>Country</b>	<b>Percent</b>
United Kingdom	15.6%
Germany	15.6%
France	15.4%
Japan	14.6%
OECD Median	14.2%
United States	12.7%
Canada	12.0%
Australia	12.0%
New Zealand	11.3%

## Chart IV-11. Percentage of Total Population Age 65 and Over, 1960–1996



OECD Health Data 1998

## Chart IV-12. Countries provided varying levels of access to nursing home beds in 1995.

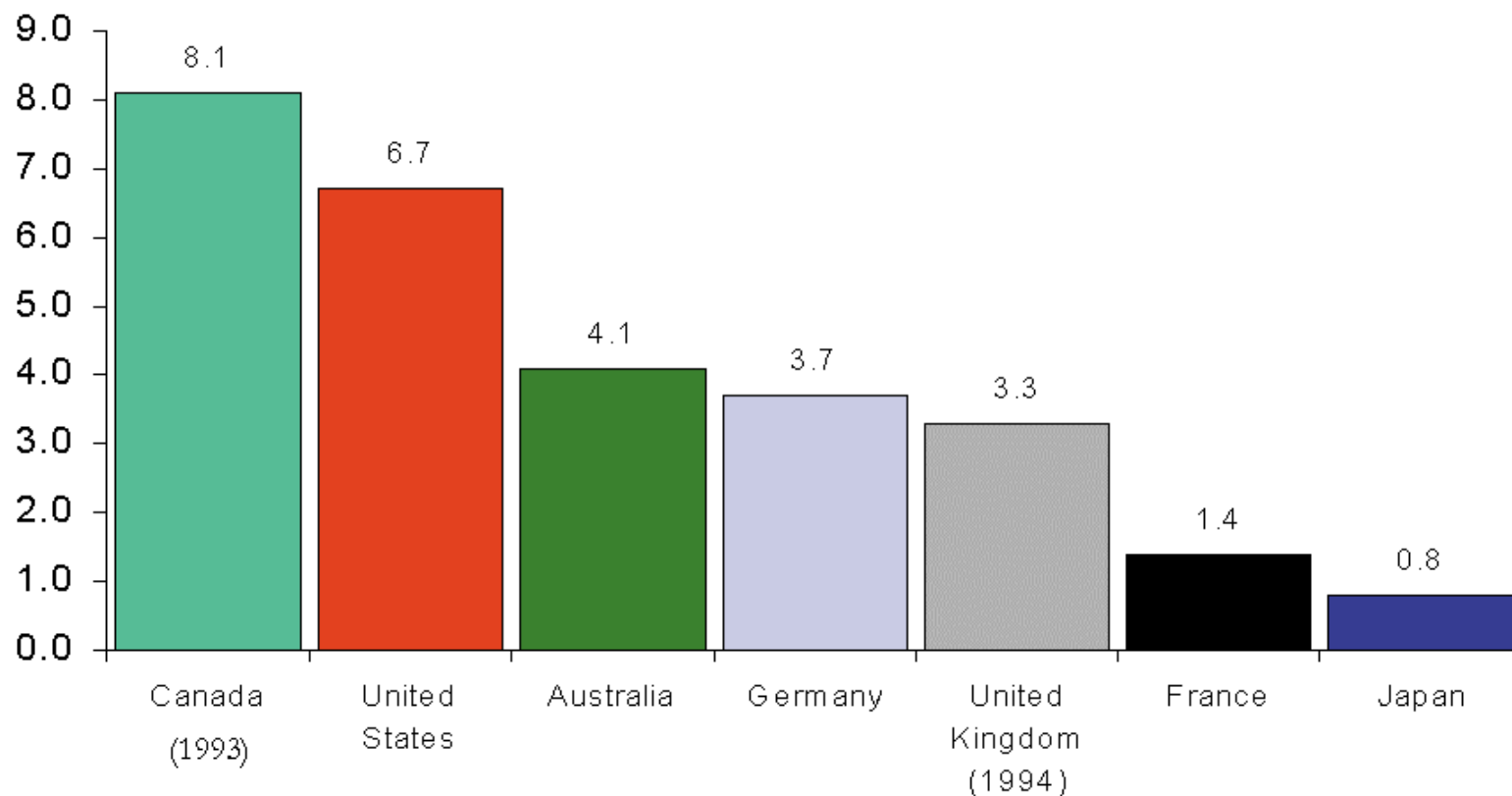
- Canada had the most nursing home beds in 1995.
- The United States had more nursing home beds than most other industrialized countries in 1995.<sup>27</sup>
- Only France and Japan had fewer nursing home beds per capita than the United States in 1995.
- Canada had 10 times more nursing home beds than Japan in 1995.
- The number of nursing home beds per 1,000 people increased in some countries from 1980 to 1995 and decreased in others.
  - Large increases in France, Germany, and the United Kingdom
  - Relatively stable in the United States
  - Declines in Australia and Canada

	1980	1995	% Change
United Kingdom	0.5	3.3 <sup>b</sup>	560%
Germany	1.3	3.7	185%
France	0.7	1.4	100%
United States	6.4 <sup>a</sup>	6.7	5%
Australia	4.4	4.1	-7%
Canada	9.1	8.1 <sup>c</sup>	-11%

a1977  
b1994  
c1993

OECD Health Data 1998

### Chart IV-12. Nursing Home Beds per 1,000 People, 1995



OECD Health Data 1998

### Chart IV-13. The number of nurses per capita was similar in most countries in 1995.

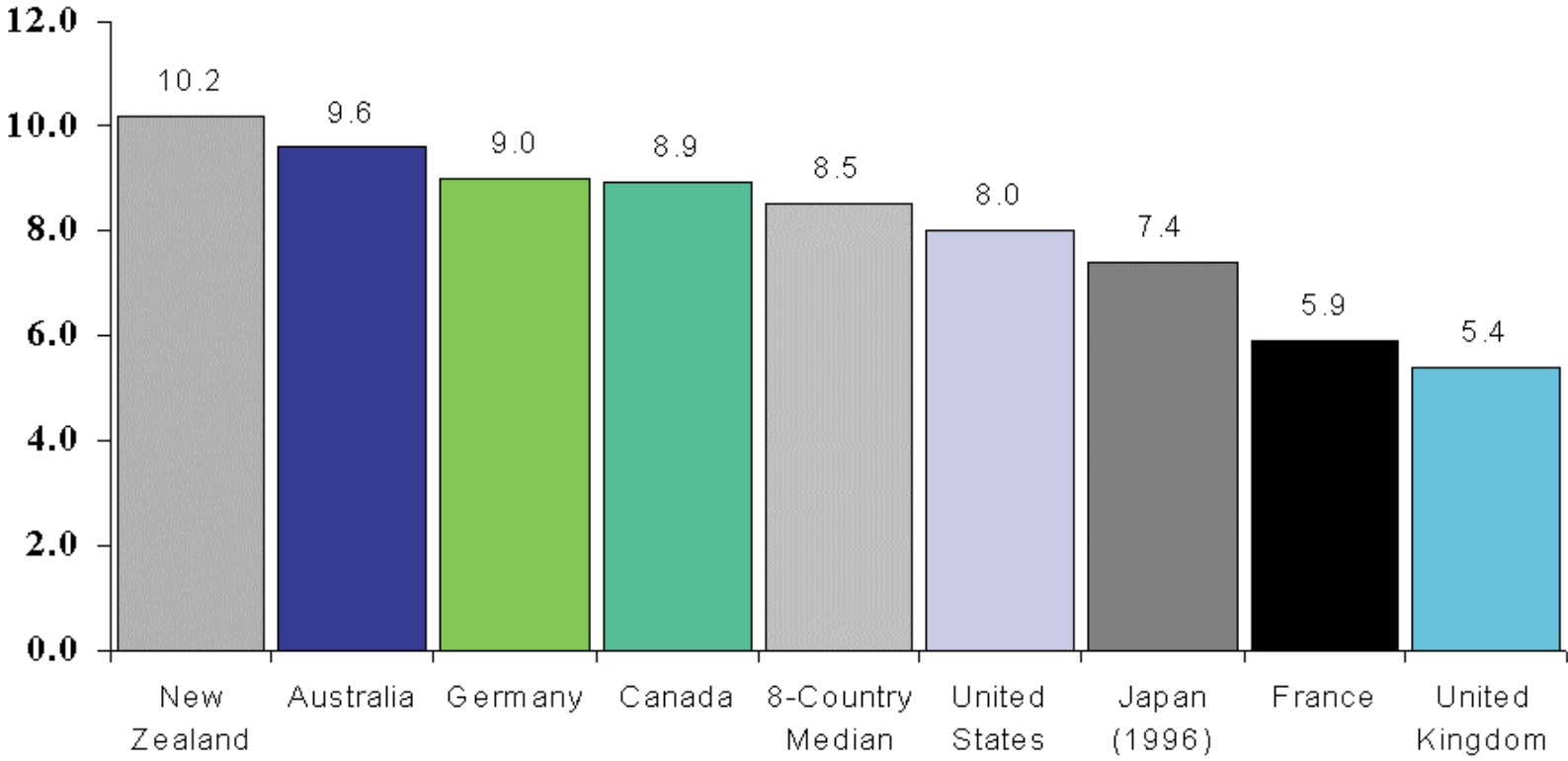
- The United States had slightly less than the median number of certified nurses per capita in the eight countries in 1995.<sup>38</sup>
- New Zealand had almost twice as many nurses per capita as the United Kingdom.<sup>39</sup>
- All eight countries had increases in the number of nurses per capita from 1980 to 1995 except for Canada.

Country	1980	1995	% Change
Germany	4.9	9.0	84%
Japan	4.2	7.4 <sup>a</sup>	76%
New Zealand	6.1	10.2	67%
8-Country Median	5.3	8.5	61%
United States	5.6	8.0	43%
Australia	7.0	9.6	37%
France	4.6	5.9	28%
United Kingdom	5.2	5.4	4%
Canada	9.6	8.9	-7.1%

<sup>a</sup>1996



**Chart IV-13. Number of Certified Nurses per 1,000 People, 1995**



OECD Health Data 1998



## **V. Health Care Outcomes**

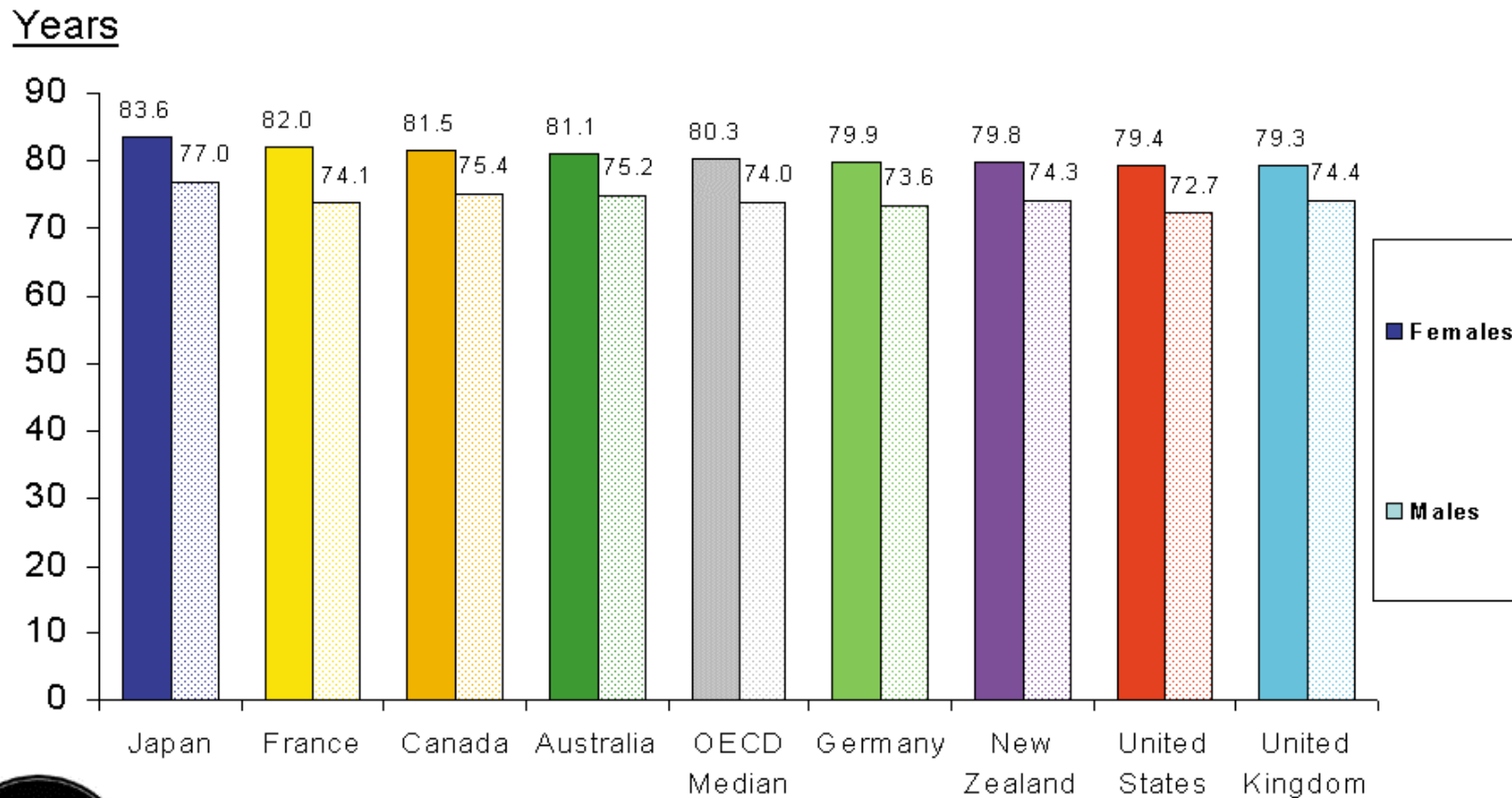
## Chart V-1. Life expectancy at birth was relatively short in the United States in 1996.<sup>40</sup>

- In 1996, the United States had the shortest life expectancy at birth for men (72.7 years) and the second shortest for women (79.4).
- Japan had the longest life expectancy at birth for both women (83.6) and men (77.0).
- Women had an average life expectancy at birth of 6.3 years longer than men in 1996.
- In Japan, life expectancy at birth increased 12.6 years from 1960 to 1996. During this period, life expectancy in Japan increased in relative ranking from last to first among the eight countries.<sup>40</sup>

<b>Change in Life Expectancy 1960–1996</b>			
<b>Country</b>	<b>1960</b>	<b>1996</b>	<b>Change</b>
Japan	67.8	80.3	12.6
Canada	71.4 <sup>a</sup>	78.5	7.1
Australia	70.9	78.2	7.3
France	70.3	78.1	7.8
OECD Median	70.1	77.2	7.1
New Zealand	71.3	77.1	5.7
United Kingdom	71.3	76.9	5.6
Germany	69.9 <sup>b</sup>	76.8	6.9
United States	69.7	76.1	6.4

<sup>a</sup>1961  
<sup>b</sup>1963

## Chart V-1. Life Expectancy at Birth, 1996



OECD Health Data 1998

## Chart V-2. At age 65, life expectancy was approximately 19 years for females and 16 years for males in 1996.

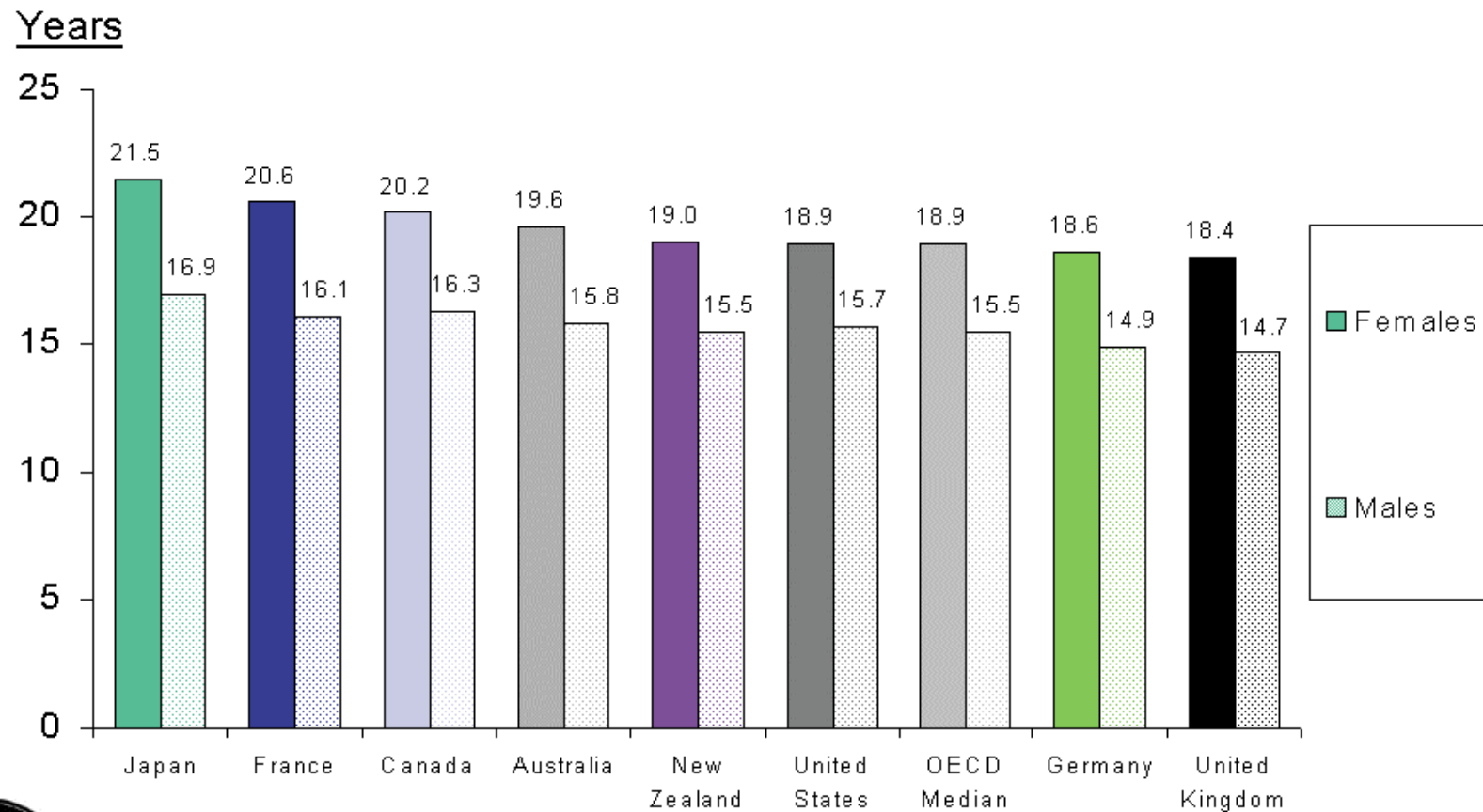
- Life expectancy at age 65 for both males and females was longest in Japan (19.2 years) and shortest in the United Kingdom (16.6 years) for both males and females in 1996.
- Life expectancy for both males and females at age 65 has increased significantly since 1960 in the eight countries. The rate of increase has been most dramatic in Japan, going from last to first among the countries studied.
- At age 80, the average life expectancy was 8 to 10 years for females and 6 to 8 years for males in 1994. Canada had the longest life expectancy and Germany the shortest at age 80 for both males and females in 1994.

**Change in Life Expectancy at Age 65, 1960–1996**

Country	1960	1996	Change in Years
Japan	12.9	19.2	6.4
France	14.1	18.4	4.3
Canada	14.9 <sup>a</sup>	18.3	3.4
Australia	14.1	17.7	3.7
United States	14.3	17.3	3.0
New Zealand	14.2 <sup>a</sup>	17.3	3.1
OECD Median	13.9	17.3	3.4
Germany	13.4 <sup>b</sup>	16.8	3.4
United Kingdom	n/a	16.6	n/a

<sup>a</sup>1961  
<sup>b</sup>1963

## Chart V-2. Life Expectancy at Age 65, 1996



OECD Health Data 1998

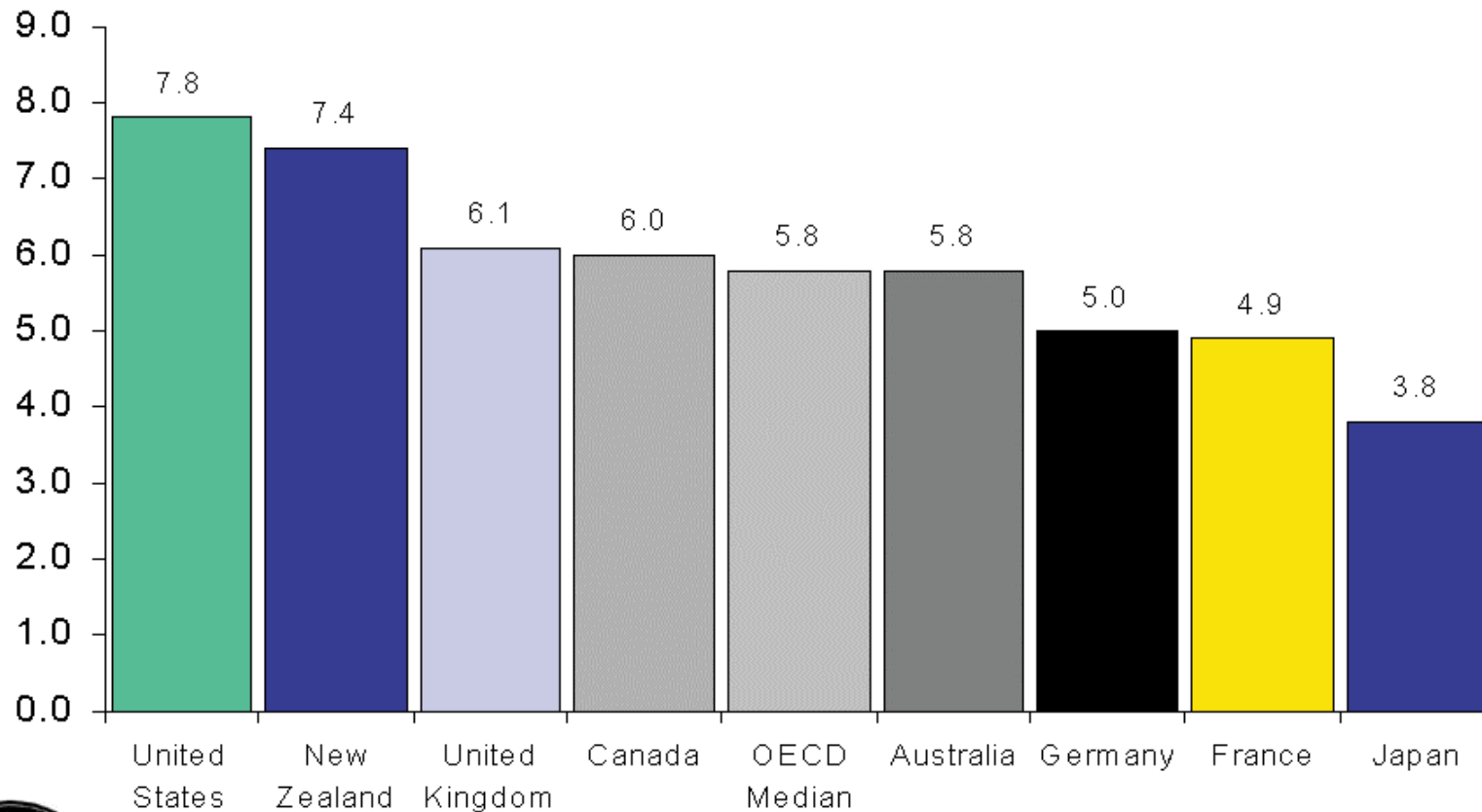
### Chart V-3. Infant mortality rates have declined dramatically over the last 26 years.

- The United States had the highest infant mortality rate in 1996.<sup>28</sup>
- Germany had the greatest reduction from 1960 to 1996.
- Australia had the smallest reduction from 1960 to 1996.
- The reduction in infant mortality in the United States was less than the OECD median from 1960 to 1996.

Country	1960	1996	Total Reduction
United States	26.0	7.8	18.2
New Zealand	22.6	7.4	15.2
United Kingdom	22.5	6.1	16.4
Canada	27.3	6.0	21.3
OECD Median	27.4	5.8	21.6
Australia	20.2	5.8	14.4
Germany	33.8	5.0	28.8
France	27.4	4.9	22.5
Japan	30.7	3.8	26.9



### Chart V-3. Infant Mortality Rate per 1,000 Live Births, 1996

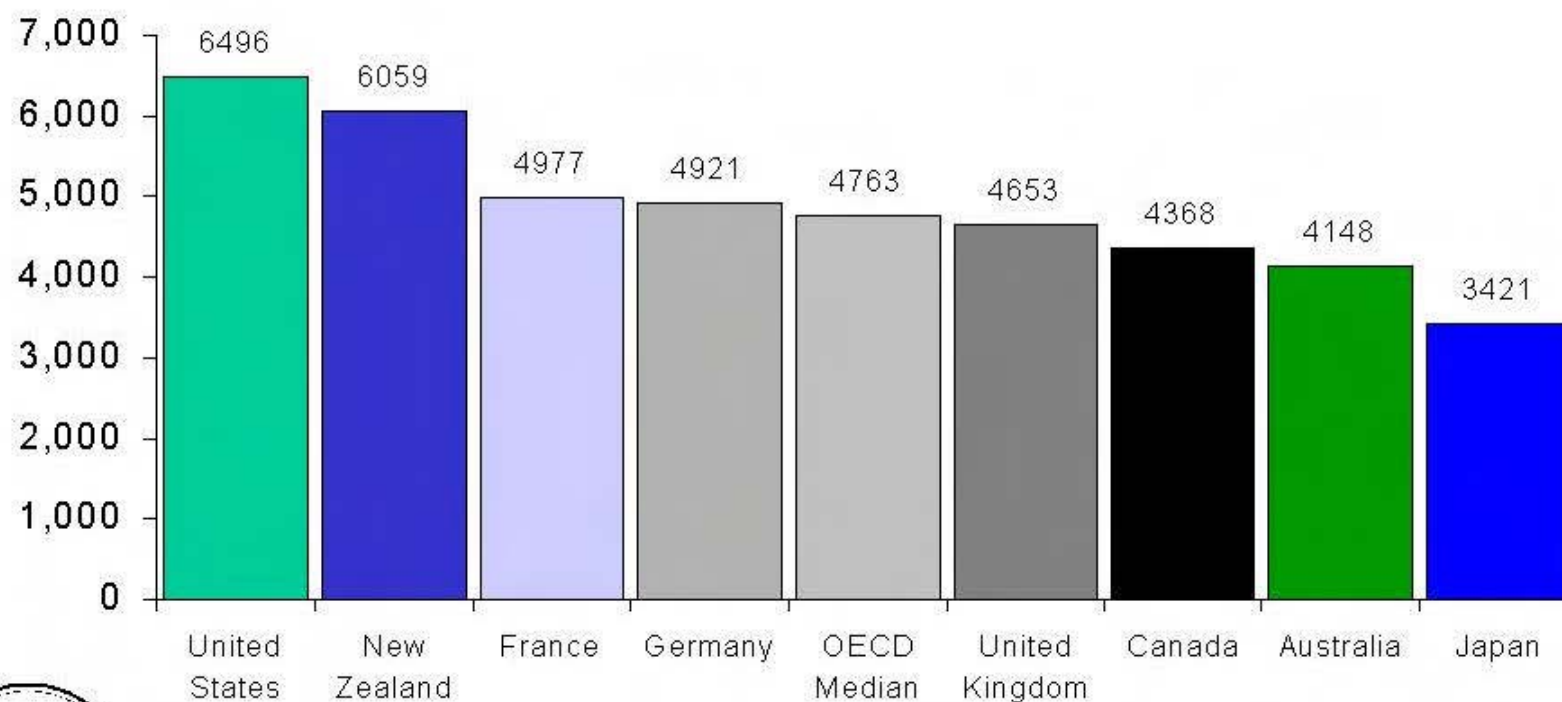


OECD Health Data 1998

## **Chart V-4. The United States had the highest rate of premature deaths from 1965 to 1995.**

- The United States had the most potential years of life lost per 100,000 people (6,496) and Japan the fewest (3,421) in 1995.<sup>29</sup>
- The OECD median was 4,763 potential years of life lost per 100,000 people in 1995.
- Mortality is considered premature if it was preventable had appropriate medical knowledge been applied and known public health principles been in force, or had risky behavior not been so prevalent.

### Chart V-4. Potential Years of Life Lost per 100,000 People for All Causes Except Suicide, 1995

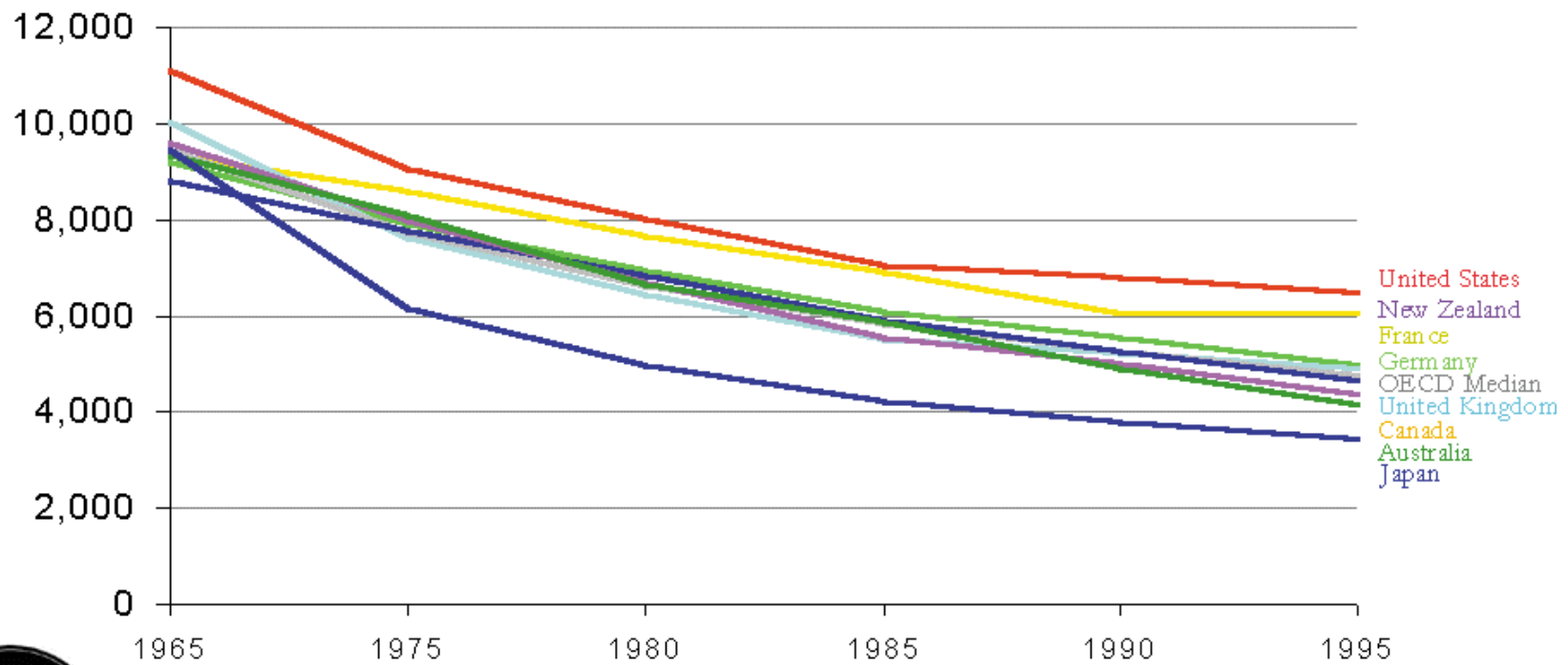


OECD Health Data 1998

## **Chart V-5. All countries showed improvements in reducing premature deaths from 1965–1995.**

- Potential years of life lost declined in all eight countries from 1965 to 1995. The average rate of reduction was 49 percent.
- Japan showed the greatest decline—a reduction from 9,446 to 3,421 years, or 64 percent.
- New Zealand showed the slowest decline—a reduction from 9,338 to 6,059, or 35 percent.
- The reduction in the United States was 11,106 to 6,496 years, or 42 percent.

**Chart V-5. Potential Years of Life Lost per 100,000 People Under Age 70 for All Causes Except Suicide, 1965–1995**

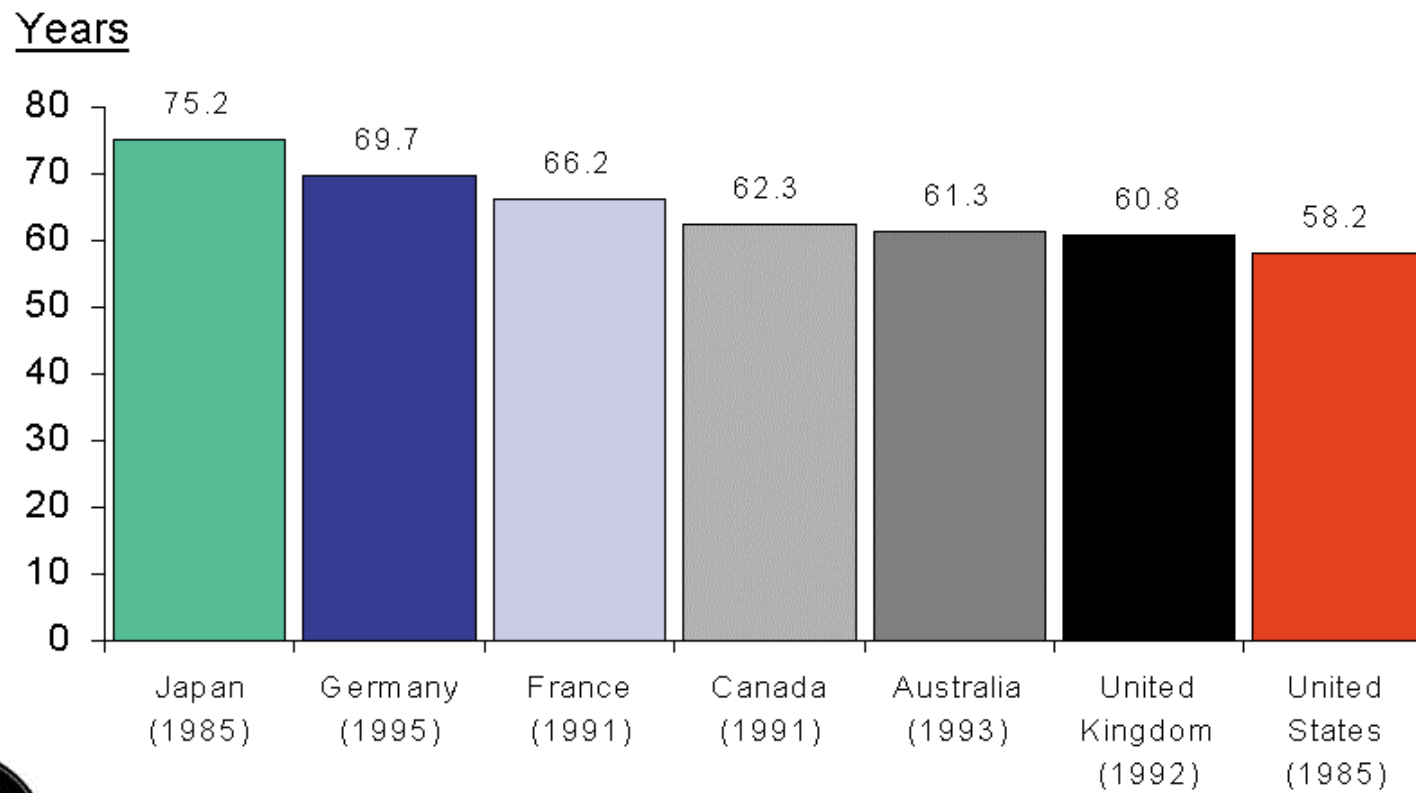


OECD Health Data 1998

## Chart V-6. Disability-free life expectancy is lowest in the United States.

- Disability-free life expectancy is an example of a more sophisticated health status indicator. Unfortunately, statistics for this are not collected on an annual basis in most countries.
- Disability-free life expectancy ranges from 75.2 years in Japan to 58.2 years in the United States.<sup>41</sup>
- A number of other health outcome measures for which data are being collected are under development. These include:
  - Quality-Adjusted Life Years
  - Years of Healthy Life
  - Potential Years of Life Lost
  - Health Expectancy
  - Active Life Expectancy

# Chart V-6. Disability-Free Life Expectancy at Birth



OECD Health Data 1998





## **VI. Country Summaries**

# The Australian Health Care System

## Who is covered?

Coverage is universal.

## What is covered?

- **Services:** Some preventive services, inpatient and outpatient hospital care; physician services; inpatient and outpatient drugs; dental care; mental health care; and rehabilitation. Free choice of general practitioner.
- **Cost-sharing:** Medicare reimburses 75 percent of the scheduled fee for inpatient services and 85 percent of ambulatory services. Doctors are free to charge above the scheduled fee or they may direct bill the government when there is no patient charge. 70% of medical services are direct billed. Prescription pharmaceuticals have a patient co-payment. Out-of-pocket payments account for 19 percent of health expenditures.

## How are revenues generated?

- **National Health Insurance (Medicare):** Compulsory national health insurance administered by the federal government. National health insurance is funded by a mixture of general tax revenue, a 1.5% levy on taxable income (which accounts for 18.5% of federal outlays on health), state revenue, and fees paid by patients. Government funds 68% of health expenditures (45% federal and 23% state).
- **Private Insurance:** Mainly not-for-profit mutual insurers cover the gap between Medicare benefits and schedule fees for inpatient services. Doctors may bill above the scheduled fee. Private insurers also offer private hospital treatment, choice of specialists, avoidance of

queues for elective surgery, and greater access to technological interventions than the public system.

- Private insurance covers one-third of the population and accounts for 11 percent of health expenditures.

## How is the delivery system organized?

- **Physicians:** Primary care physicians act as gatekeepers. Physicians are generally reimbursed by a fee-for-service system. The government sets the fee schedules, but these are not maximum prices.
- **Hospitals:** Mostly public, run by the states. The states pay for public hospitals with federal government assistance negotiated via five yearly agreements. Physicians in public outpatient hospitals are either salaried (but may have private practices and fee-for-service income) or paid on a per-session basis.
- **Government:** The federal government has control over hospital benefits, pharmaceuticals, and medical services. States are charged with operating public hospitals and regulating all hospitals, nursing homes, and community-based general services.

## How are costs controlled?

- Australia controls its health care costs through a combination of global hospital budgets, fee schedules, limited diffusion of technology, and waiting lists. Also, the government restricts the number of medical students and Medicare-licensed providers.

# The British Health Care System

## Who is covered?

Coverage is universal.

## What is covered?

- **Services:** Publicly funded coverage includes preventive services, inpatient and outpatient hospital care; physician services; inpatient and outpatient drugs; dental care; mental health care; and rehabilitation. Free choice of general practitioner.
- **Cost-sharing:** Few cost-sharing arrangements for covered services (e.g., outpatient drugs, dentistry). Out-of-pocket payments account for 8 percent of health expenditures.

## How are revenues generated?

- **National Health Service (NHS):** The NHS is administered by the NHS Executive, regional and district health authorities. In 1997, the new government shifted from the internal market to integrated care, partnership, and long-term service agreements between providers and purchasers. The NHS, which is funded by a mixture of general taxation and national insurance contributions, accounts for 88 percent of health expenditures.
- **Private Insurance:** Mix of for-profit and not-for-profit insurers cover private medical care, which plays a complementary role to the NHS. Private insurance offers choice of specialists, avoidance of queues for elective surgery, and higher standards of comfort and privacy than the NHS. Private insurance covers 12 percent of the population and accounts for 4 percent of health expenditures.

## How is the delivery system organized?

- **Physicians:** General practitioners act as gatekeepers and are in process of forming Primary Care Groups with budgets for all care of enrolled populations. Physicians are paid directly by the government through a combination of methods: salary, capitation, and fee-for-service. Private providers set their own fee-for-service rates but are not generally reimbursed by the public system.
- **Hospitals:** Mainly semiautonomous, self-governing public trusts that contract with groups of purchasers (e.g., Primary Care Groups, health authorities) on a long-term basis. Consultants (specialist physicians) may supplement their salary by treating private patients.
- **Government:** The British government is a purchaser and provider of health care and retains responsibility for legislation and general policy matters.

## How are costs controlled?

- The government decides on an annual budget for the NHS. To control utilization and costs, the United Kingdom has controlled physician training, capital expenditure, pay, and purchaser budgets. There are also waiting lists. In addition, a centralized administrative system results in lower overhead costs. Other cost-control mechanisms include a drive for clinically cost-effective care, formal efficiency targets, and benchmarking.

# The Canadian Health Care System

## Who is covered?

Coverage is universal.

## What is covered?

- **Services:** The federal government requires that insurance cover “all medically necessary services.” Provinces have some flexibility in coverage. Required benefits include preventive services; inpatient and outpatient hospital care; physician services; long-term care; inpatient drugs; and outpatient drugs for the poor and the elderly (with copayment). Free choice of ambulatory care physician.
- **Cost-sharing:** Traditionally no or few cost-sharing provisions for covered services.

## How are revenues generated?

- **National Health Insurance (Medicare):** Public program administered by the provinces and overseen by the federal government. Medicare is funded by general tax revenues. Federal contributions are tied to population and provincial economic conditions, and provinces pay the remainder. Medicare accounts for 72 percent of health expenditures.
- **Private Insurance:** The majority of Canadians have supplemental private insurance coverage through group plans, which extends the range of insured services, such as dental care, rehabilitation, prescription drugs, and private care nursing. The private sector (private insurance and out-of-pocket payments) accounts for 28 percent of health expenditures.

## How is the delivery system organized?

- **Physicians:** Most physicians are in private practice and accept fee-for-service Medicare payment rates set by the government. Provincial medical associations negotiate insured fee-for-service schedules with provincial health ministries. Some physicians set their own rates but are not reimbursed by the public system.
- **Hospitals:** Mainly non-profit hospitals that operate under global institution-specific or regional budgets with some fee-for-service payment. Less than 5 percent of all Canadian hospitals are privately owned. Physicians’ fees are negotiated between the doctors’ associations and provincial governments.
- **Government:** The Canadian provincial governments have the authority to regulate health providers. However, they delegate control over physicians and other providers to professional “colleges” whose duty is to set and enforce standards for licensure and practice in the public interest.

## How are costs controlled?

- The federal and provincial governments impose mandatory global hospital or regional budgets, fee caps for providers, and limits on the diffusion of technology.

# The French Health Care System

## Who is covered?

Coverage is universal.

## What is covered?

- Services: Compulsory benefit package includes preventive services, inpatient and outpatient hospital care, physician services; mental health care; long-term care; dental care; prescription drugs; and rehabilitation. Free choice of ambulatory care physicians.
- Cost-sharing (*ticket modérateur*): 25 percent for conventional treatment, up to 60 percent for comfort drugs. Out-of-pocket payments account for 17 percent of health expenditures.

## How are revenues generated?

- Sickness Insurance Funds (SIFs): Autonomous, not-for-profit, nongovernmental bodies (although regulated by the government), with national headquarters and regional networks. SIFs are financed with compulsory payroll contributions (13% of wage) from employers (representing about 70% of contributions) and employees (about 30% of contributions). There is no upper earnings limit. SIFs cover 99 percent of the population and account for 75 percent of health expenditures.
- Mutual Insurance Funds (MIFs): In addition to compulsory payroll contributions to the sickness funds, the *mutuelles* provide supplemental, voluntary insurance to cover cost-sharing arrangements (*ticket modérateur*) and extra billings. MIFs cover about 80

percent of the population and account for 6 percent of health expenditures.

- Private Insurance: Voluntary for those individuals who never contributed to the national health insurance system (e.g., the affluent self-employed). Private insurance, which covers a small percentage of the population, accounts for 2 percent of health expenditures.

## How is the delivery system organized?

- Physicians: General practitioners have no formal gatekeeper function. Physicians are self-employed and are paid on a fee-for-service basis. Patients pay physicians' bills and are reimbursed by the sickness funds (public reimbursement model).
- Hospitals: Private hospitals are both for-profit and not-for-profit, usually with fee-for-service doctors. Public hospitals employ salaried doctors. The sickness funds contract with private and public hospitals (public contract model).
- Government: The French government regulates contribution rates paid to sickness funds, sets global budgets and salaries for public hospitals, and supervises national fee schedule negotiations.

## How are costs controlled?

- Emphasis is placed on global budgeting, setting moderate fee schedules, and cost-sharing arrangements.

# The German Health Care System

## Who is covered?

- Everyone is eligible to participate in the public system. Individuals above a determined income level have the right to obtain private coverage.

## What is covered?

- Services: Compulsory benefit package includes preventive services, inpatient and outpatient hospital care; physician services; mental health care; long-term care; dental care; prescription drugs; rehabilitation; and sick leave compensation. Free choice of ambulatory care physicians.
- Cost-sharing: Traditionally few cost-sharing provisions. Out-of-pocket payments account for 11 percent of health expenditures.

## How are revenues generated?

- Sickness Insurance Funds (SIFs): About 600 autonomous, not-for-profit, nongovernmental bodies (although regulated by the government). They are funded by compulsory payroll contributions (averaging 14% of wage), equally shared by employers and employees. SIFs cover 92 percent of the population. The unemployed, the homeless, and immigrants are covered through a special sickness fund financed through general revenues. Sickness funds account for 81 percent of health expenditures.
- Private Insurance: Private insurance, which provides health insurance based on voluntary, individual contributions, covers 8 percent of the population (the

affluent, self-employed, and civil servants). Private insurance accounts for 8 percent of health expenditures.

## How is the delivery system organized?

- Physicians: General practitioners have no formal gatekeeper function. Private physicians are paid on a fee-for-service basis. Representatives of the sickness funds negotiate with the regional associations of physicians to determine aggregate payments.
- Hospitals: Hospitals are for-profit and not-for-profit, both private and public. They are staffed with salaried junior and fee-for-service senior doctors. Representatives of the sickness funds negotiate with individual hospitals over payment rates.
- Government: The German government regulates the sickness funds. However, it is increasingly willing to reduce its interventions in favor of a self-regulating system.

## How are costs controlled?

- The government imposes mandatory sector-wide budgets for physician and hospital services and pharmaceuticals. Health care reforms in the 1990s included increased competition among sickness funds; innovative contract models for sickness funds and providers; the integration of ambulatory and hospital care; the introduction of a per-admission hospital payment system; the control of physician supply; and moderate cost-sharing provisions.

# The Japanese Health Care System

## Who is covered?

Coverage is universal.

## What is covered?

- Services: Preventive services; inpatient and outpatient services; physician services; mental health care; long-term and home care; dental care; prescription drugs; and rehabilitation. Free choice of general practitioner.
- Cost-sharing: Cost-sharing provisions range from 20 percent to 30 percent of charges. Out-of-pocket payments account for 12 percent of health expenditures.

## How are revenues generated?

- Employees' Health Insurance System (EHI): About 1,900 not-for-profit, nongovernmental, and governmental bodies. Premiums are funded by compulsory payroll contributions (8% of wage), equally shared by employers and employees.
  - Company-Managed Health Insurance (CMHI): Covers employees of large corporations.
  - Government-Managed Health Insurance (GMHI): Covers employees of medium-size and small companies.
- National Health Insurance (NHI): Covers the self-employed, pensioners and their dependents, and trade associations. Local governments act as insurers. Premiums are calculated on the basis of income, the number of individuals in the insured household, and assets.

Overall, premiums account for 57 percent of health expenditures. The federal government pays 24 percent of medical care expenditures, while local governments pay 7 percent.

## How is the delivery system organized?

- Physicians: Physicians have no formal gatekeeper function. Most are in private practice and are paid through a uniform fee schedule. Medical and pharmaceutical practices are often combined, and a large portion of physicians' incomes are derived from prescriptions.
- Hospitals: Mainly private, with some public hospitals. Hospitals combine acute and long-term care functions and are paid according to a uniform fee schedule. Hospital-based physicians are salaried.
- Government: The Japanese government acts as regulator (e.g., by setting the fee schedule) and insurer. It also subsidizes health care spending for the elderly, employees of small enterprises, and the self-employed.

## How are costs controlled?

- A nationally uniform fee schedule has been adopted by nearly all providers. Volume is controlled by retrospective utilization review of services and adjustment of payment rates.

# The New Zealand Health Care System

## Who is covered?

Coverage is universal.

## What is covered?

- Services: Preventive services; inpatient and outpatient hospital care; physician services; inpatient and outpatient drugs; mental health care; and free dental care for school children. Health care is free for children. Free choice of general practitioner.
- Cost-sharing: Copayments are required for many services. GP services are means tested. Out-of-pocket payments account for 17 percent of health expenditures.

## How are revenues generated?

- General taxation: Public funding is derived from taxation and administered by a national purchasing agent, the Health Funding Authority (HFA). Care is provided by 23 hospital provider organizations, known as Hospital and Health Services (HHS), general practitioners (most of whom are grouped as Independent Practitioner Associations), and other noncrown providers of child care, disability support services, etc. These parties compete for the provision of health services. Public funding accounts for 76 percent of health expenditures.
- Private Insurance: Mainly not-for-profit insurers cover private medical care, which plays a complementary role to the NHI. Private insurance is most commonly used to cover cost-sharing requirements, elective surgery in private hospitals, and specialist outpatient

consultations. Private insurance covers about one-third of the population and accounts for 7 percent of health expenditures.

## How is the delivery system organized?

- Physicians: General practitioners act as gatekeepers and are independent providers. They are self-employed and are paid through a combination of payment methods: fee-for-service, partial government subsidy, and negotiated contracts with HFA through IPAs. The payment system is currently moving from fee-for-service to capitation. Private insurance and out-of-pocket contributions pay the remainder.
- Hospitals: Mainly semiautonomous, government-owned companies that contract with the HFA. Consultants (specialists) are commonly salaried but may supplement their salaries through treatment of private patients.
- Government: New Zealand's government is a purchaser and provider of health care and retains the responsibility for legislation and general policy matters.

## How are costs controlled?

- The government sets the annual budget for the HFA. In addition, New Zealand has shifted from open-ended fee-for-service arrangements to innovative contracting and funding mechanisms, such as capitation for geographically defined populations and decentralization of budget responsibility. Waiting lists, as well as rationing to control utilization and costs, have also been adopted.



# The United States Health Care System

## Who is covered?

Public and private health insurance covers 83 percent of the population.

## What is covered?

- Services: Benefit packages vary according to type of insurance, but often include inpatient and outpatient hospital care and physician services. Many also include preventive services, dental care, and prescription drug coverage.
- Cost-sharing: Cost-sharing provisions vary by type of insurance. Out-of-pocket payments account for 17 percent of health expenditures.

## How are revenues generated?

- Medicare: Social insurance program for the elderly, some of the disabled under age 65, and those with end-stage renal disease. Administered by the federal government, Medicare covers 13 percent of the population. The program is financed through a combination of payroll taxes, general federal revenues, and premiums. It accounts for 20 percent of total health expenditures.
- Medicaid: Joint federal-state health insurance program covering certain groups of the poor. Medicaid is administered by the states, which operate within broad federal guidelines. It covers 12 percent of the population and accounts for 14 percent of total health expenditures.

- Private Insurance: Provided by more than 1,200 not-for-profit and for-profit health insurance companies regulated by state insurance commissioners. Private health insurance can be purchased by individuals, or it can be funded by voluntary premium contributions shared by employers and employees on a negotiable basis. Private insurance covers 58 percent of the population. It accounts for 33 percent of total health expenditures.
- Others: Private and public funds account for 16 percent of expenditures.

## How is the delivery system organized?

- Physicians: General practitioners have no formal gatekeeper function, except within some managed care plans. The majority of physicians are in private practice. They are paid through a combination of methods: charges, discounted fees paid by private health plans, capitation rate contracts with private plans, public programs, and direct patient fees.
- Hospitals: For-profit, non-profit, and public hospitals. Hospitals are paid through a combination of methods: charges, per admission, and capitation.
- Government: The federal government is the single largest health care insurer and purchaser.

## How are costs controlled?

- In recent years payers have attempted to control cost growth through a combination of selective provider contracting, discount price negotiations, utilization control practices, risk-sharing payment methods, and managed care.



## **VII. Endnotes**

## Endnotes

- <sup>1</sup> The 29 OECD countries are Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.
- <sup>2</sup> All 1997 values cited are not spending estimates but projections.
- <sup>3</sup> Total health expenditures include personal health care (inpatient, ambulatory, medical goods), collective programs (promotion and prevention, maternal and child health, administration, etc.), and investment (physical assets as well as new knowledge).
- <sup>4</sup> International comparisons of the level of health spending must recognize that countries include slightly different services in the health sector and that the numbers are continually revised as new information becomes available.
- <sup>5</sup> Purchasing power parities are used to adjust for differences in cost of living across countries by comparing prices for a fixed basket of goods. The basket of goods used here is broad-based, not health-based.
- <sup>6</sup> The minimum data requirement used in calculations of the OECD median was 20 of 29 countries. Not all countries report data every year.
- <sup>7</sup> The increases are measured in purchasing power parities that measure gains and losses in purchasing power with respect to the dollar.
- <sup>8</sup> Gross domestic product measures the total output produced and utilized inside a country in a given year. It excludes imports and exports.
- <sup>9</sup> According to the OECD, the estimate for total U.S. expenditures on health is 14.2 percent of GDP. The estimate by the Office of the Actuary in the Health Care Financing Administration (HCFA) is 13.6 percent. The disparity is attributable to differences in the method of calculating GDP, not health expenditures. In order to correspond to U.S. numbers, the HCFA estimate was substituted.
- <sup>10</sup> Data from 1994 for 17 countries were used to calculate the median.
- <sup>11</sup> In the United States, inpatient expenditures and hospital costs per day include some long-term care facilities, including nursing homes, that are affiliated with hospitals.

- <sup>12</sup> The percentages for Japan cannot be compared to the other countries because of the difficulty in separating expenditures for pharmaceuticals from those for physician services.
- <sup>13</sup> Physician expenditures typically (but not for the United States) refer to outpatient and ambulatory contacts; the fees or salaries of physicians' interventions in hospitals are typically aggregated into inpatient care.
- <sup>14</sup> Source: U.S. Bureau of the Census, *Current Population Survey*, 1980–1996; U.S. Department of Health, Education and Welfare, *Health Interview Survey*, 1953–1976.
- <sup>15</sup> Admissions and length-of-stay data may differ depending on whether same-day admissions are counted.
- <sup>16</sup> Some of the differences are attributable to different rates of diffusion of ambulatory surgery and whether patient transfers within hospitals are counted as admissions.
- <sup>17</sup> For the United States, the ratio describes community hospitals.
- <sup>18</sup> A simple comparison of physician visits per capita ignores differences in the duration of the visit, scope of services offered, use of telephone consultations, quality of care provided, level of skill/training of the physician, and provision of outpatient surgery in physician offices.
- <sup>19</sup> Physician incomes are obtained from survey data.
- <sup>20</sup> The OECD definition of physician income is “average professional earnings net of deductible practice expenditure, before taxes and including social security contributions (salaried and/or self-employed).”
- <sup>21</sup> Countries differ substantially on how much they subsidize undergraduate and medical school education, which could explain some of the differences in physician income.
- <sup>22</sup> Differences exist across the countries in the types of services provided by physicians and who are counted as physicians.
- <sup>23</sup> Reliable, recent information is not available for physician incomes in Japan and New Zealand.
- <sup>24</sup> We used the all-items consumer price index to adjust for inflation.
- <sup>25</sup> The level of spending on pharmaceuticals is dependent on many factors, including patient expectations, formulary use, and prices.

- <sup>26</sup> These are expenditures outside the hospital setting.
- <sup>27</sup> The OECD estimation method for nursing home beds varies from country to country. In Australia, the definition is “beds approved for respite care”; in Canada, “residential care facilities (all classes)”; in France, “long-term beds except beds in ‘medical care section’ in elderly homes”; in Japan, “beds at health service facilities for elderly, which provide medical care as well as daily living services to bedridden elderly people”; in the United States, “only skilled nursing facilities.”
- <sup>28</sup> Epidemiologists have noted that the registration of low birth weight infants, which varies greatly across countries, considerably influences the infant mortality rate.
- <sup>29</sup> “Potential years of life lost” is a measure of the years of life lost due to premature death. The potential limit to life used here is arbitrarily set at 69 years. The following causes of mortality were examined: tuberculosis, diabetes, circulatory system, ischaemic heart diseases, cerebro-vascular diseases, malignant neoplasms, lung cancer, chronic obstructive pulmonary diseases, liver cirrhosis, external causes, and road accidents.
- <sup>30</sup> In France, less than 1 percent of the population is uncovered for health insurance. These are individuals for whom it is difficult to evaluate the criteria for eligibility.
- <sup>31</sup> R. Seitz, H. König, E. Jelastopulu, and M. Arnold, *Managed Care—An Option for the German Health Care System?* Office of Health Economics: London, 1998.
- <sup>32</sup> The U.K. figure is an estimate, adjusting for day surgery cases and number of spells of care, which are sometimes included in measurements of inpatient admission rate in the United Kingdom.
- <sup>33</sup> J. P. Newhouse, “An Iconoclastic View of Health Cost Containment,” *Health Affairs*, 12 Supplement 1993: 152–71.
- <sup>34</sup> No data are available for New Zealand.
- <sup>35</sup> The definition of physician varies from country to country. Chiropractors and osteopaths may or may not be included.
- <sup>36</sup> The definition of specialist varies from country to country to some extent.
- <sup>37</sup> Calculated using OECD data on health expenditures by age group.
- <sup>38</sup> The median for the eight countries was calculated because there were not sufficient data to calculate the OECD median.

<sup>39</sup> Due to differences in how nurses are defined, the estimates may not be comparable across countries, but they are generally consistent over time. For example, the United Kingdom does not include in its estimate qualified nurses working in the private sector, residential nursing homes, or outside health care.

<sup>40</sup> Life expectancy was calculated here by averaging the figures for males and females.

<sup>41</sup> Disability-free life expectancy combines mortality and disability data to determine how many years, on average, a person can expect to live without disability. This indicator is still considered to be under construction; efforts are being made towards international harmonization. The two most important issues are agreement on the definition of disability and agreement on an instrument that measures it reliably. The most recent year of available data is used for each country.

