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# HEALTH CARE UNDER FRENCH NATIONAL HEALTH INSURANCE

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by Victor G. Rodwin and Simone Sandier

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**Prologue:** *The United States has traditionally looked to the United Kingdom, its cultural parent, when studying alternative social and political models. Health care is no exception. In the early 1980s Canada's health care system as well came under American scrutiny, and Germany's followed by the end of the decade. In this paper authors Victor Rodwin and Simone Sandier turn their attention to the less frequently studied model of France. "The French health system is a model no less worthy of study than the British, Canadian, or German systems," they assert. Rodwin has suggested that "formidable linguistic and cultural barriers" to date have discouraged widespread study of the French system; yet this system is in many ways particularly relevant for American consideration. Fee-for-service reimbursement, total freedom of provider choice, an important private for-profit hospital sector, and patient copayments exemplify a principle of "liberalism" that some Americans find missing in the British and Canadian systems. However, a principle of "solidarity" nourishes a national health insurance system that provides nearly universal coverage, and stringent government price controls keep price levels well below those of the United States. The French public/private mix offers unique possibilities for U.S. study—all the more so since outcome and performance indicators, as well as public opinion on the health care system, are more favorable than in the United States. Rodwin is director of the Office of International Programs and associate professor of health policy and management at New York University's (NYU's) Wagner School. He codesigned and directed (1986–1991) NYU's Advanced Management Program for Clinicians. Sandier is research director at the Centre de Recherche, d'Etudes et de Documentation en Economie de la Santé (CREDES) in Paris. She is an elected member of the (U.S.) Institute of Medicine.*

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**Abstract:** Several elements of the French health system—the predominance of office-based medical practice, the mix of private and public hospitals, the use of patient cost sharing, direct payment of physicians by patients, and financing derived from payroll taxes—closely resemble aspects of the U.S. health system. There are four major differences between the two systems: the French system covers more than 99 percent of the population; the prices of health services in France are lower than in the United States; the volume of most services is higher than in the United States; and French health care spending per capita is lower than in the United States. Recently enacted and proposed reforms in France likely will strengthen existing health spending targets and utilization controls.

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French national health insurance provides universal coverage and high levels of services to a population that is, on average, older than that of the United States.<sup>1</sup> There are no queues for tertiary hospital services, no “patient dumping” arising from financial barriers to care, and no public complaints about rationing health care. What is more, France spends 9.1 percent of its gross domestic product (GDP) on health care, compared with 13.4 percent in the United States.<sup>2</sup> Despite these impressive features of French national health insurance, there are also flaws. But the French health system is a model no less worthy of study than the British, Canadian, or German systems.

Several salient features of the French health care system—the dominance of office-based private practice (*la médecine libérale*) for ambulatory care, the mix of public and private hospitals, the widespread use of cost sharing, the predominant practice of direct payment from patient to doctor, and the reliance upon financing derived from payroll taxes—resemble elements of the U.S. health system. These points of convergence make French national health insurance especially relevant to Americans interested in learning from abroad. This is all the more true given the current prospects for health care reform and the interest in proposals for employer-financed national health insurance.

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## Overview Of The French Health Care System

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The French health care system is characterized by a powerful government role in assuring universal coverage and regulating the health system, *la médecine libérale* and cost sharing, and a public/private mix in both the financing and the provision of services. These distinguishing characteristics are grounded in three guiding principles: solidarity, liberalism, and pluralism.<sup>3</sup> The commitment to universal coverage rests on the principle of solidarity—the notion that there should be mutual aid and cooperation between sick and well, active and inactive, and that health insurance payroll taxes should be calculated on the basis of ability to pay, not actuarial risk. In France, however, the commitment to universal coverage goes beyond the financing of national health insurance and includes the manage-

ment of a national network of public hospitals, public health programs, and a small number of publicly financed health centers.

The attachment to *la médecine libérale* and to cost sharing rests on the principle of liberalism—the notion that there should be freedom of choice for physicians and patients and some direct responsibility for payment by patients. The enduring ideals behind *la médecine libérale*, first formulated in 1928 by the principal physician trade union, specified that physicians should be free to practice on a fee-for-service basis, that patients should be free to choose their physicians (and vice versa), that physicians should be assured clinical autonomy, that professional confidentiality should be respected, and that there should be direct payment between patients and doctors in private practice.

Finally, the public/private mix in the financing and provision of health care in France rests on the principle of pluralism—the tolerance of some organizational diversity, whether it be complementary, competitive, or both. With respect to financing, pluralism justifies the coexistence of multiple statutory health insurance schemes, complementary private health insurance coverage, and significant cost sharing directly by patients. With respect to the provision of health services, pluralism justifies the coexistence of public and private hospitals and both office-based private practice and public ambulatory care.

**Medical care organization.** The French have access to health services ranging from those of general practitioners (GPs) in solo practice to the most sophisticated high-technology procedures in public teaching hospitals. In contrast to hospital services, where the public sector is dominant, in ambulatory care—even more so than in the United States—health services are organized around office-based fee-for-service practice.

*Ambulatory care.* In France there are more physicians than in the United States, and they are less specialized (Exhibit 1). Although physicians in general and family practice represent only 16 percent of all physicians in office-based private practice in the United States, they make up 53 percent in France.<sup>4</sup> Nurses, physical therapists, speech therapists, and a range of other professionals also contribute to the provision of ambulatory care, mostly upon referral and mostly in private practice. Also, in contrast to the United States, where many simple laboratory tests are performed in a doctor's office, in France laboratory tests ordered by all office-based private practitioners and many hospital-based physicians are performed in independent laboratories. Pharmaceutical products other than those intended for hospital patients are purchased almost exclusively in private pharmacies whose locations and prices are regulated by the Ministry of Health.

Ambulatory care also is provided in health centers located mostly in large cities, where general practitioners and specialists work part time for

**Exhibit 1**  
**Health Care Resources And Utilization, France And United States, 1989–1991**

Resources	France	United States
Active physicians per thousand	2.67 <sup>a</sup>	2.19 <sup>b</sup>
Active physicians in private, office-based practice	1.89 <sup>a</sup>	1.44 <sup>b</sup>
General/family practice	52.9%	16.0%
Obstetricians, pediatricians, and internists	8.5	30.6
Other specialists	37.6	53.4
Total inpatient hospital beds	9.1 <sup>a</sup>	4.9 <sup>b</sup>
Short-stay hospital beds per thousand	5.1 <sup>a</sup>	4.2 <sup>b</sup>
Public beds	62.7%	24.8%
Private beds	37.3	75.2
Proprietary beds as percent of private	68.3	13.4
Nonprofit beds as percent of private	31.7	90.8
<b>Utilization</b>		
Physician visits per capita	8.3	5.5
Specialist visits per capita	3.4	3.85
Hospital days per capita	2.8	1.2
Short-stay hospital days per capita	1.4	0.8
Admission rate for all inpatient hospital services	23.1%	13.4%
Admission rate for short-stay hospital services	20.8%	12.4% <sup>c</sup>
Average length-of-stay for all inpatient hospital services (days)	12.3	8.3
Average length-of-stay in short-stay beds (days)	7.0	6.4 <sup>c</sup>

**Sources:** French data are from ECO-SANTE France, version 3 (Paris: CREDES, 1991); U.S. data are from *Health, United States, 1991*.

<sup>a</sup> 1991.

<sup>b</sup> 1989.

<sup>c</sup> 1991. National Center for Health Statistics, *National Hospital Discharge Survey*, Advance Data from Vital and Health Statistics (3 March 1993).

sessional fees. And, there is a network of centers for health checkups and occupational health services in enterprises that oversee roughly ten million salaried workers.<sup>5</sup> The French system of maternal and infant health services is a noteworthy example. About 10 percent of all prenatal consultations are provided through this public health program. But since French family allowances for each new pregnancy (\$150 a month) are contingent on seven prenatal examinations, and payment begins in the fifth month of pregnancy, virtually all pregnant women consult a general practitioner or an obstetrician, most often in private practice (for 75 percent of the population) or in hospital-based outpatient consultations (for 15 percent).<sup>6</sup>

*Hospital care.* French public and private hospitals differ in mission, technical level of medical services, patient clientele, mode of reimbursement under national health insurance, and managerial autonomy. For example, teaching and research are the domain of regional public hospitals (*Centres hospitaliers régionaux*) that are affiliated with medical schools. Public hospitals are obligated to accept all patients and to provide emer-

gency care. Although public and private hospitals serve a cross-section of the population, the poor are more likely to receive care in public hospitals.

There are more hospital beds per capita in France (9.1 beds per thousand in 1991) than in the United States (4.9 per thousand).<sup>7</sup> In contrast to the United States, where most short-stay hospital beds are in the private, nonprofit sector, in France most short-stay hospital beds are in public institutions; of the remaining beds in private hospitals, most are in proprietary doctors' hospitals known as *cliniques* (Exhibit 1).<sup>8</sup>

Public hospitals include general and specialized hospitals of variable size, ranging from regional medical centers dedicated to medical education and research, which have a virtual monopoly over highly specialized "tertiary-level" hospitals, to smaller local hospitals. All of these hospitals are managed by boards of directors that include the mayor and other local representatives. The director, however, is appointed by the Ministry of Health in Paris, and appointment of all medical staff, as well as all significant capital investments, are subject to strict ministerial supervision.<sup>9</sup>

The private sector, with 37.3 percent of all short-stay hospital beds in France, has half of all surgical beds, 28 percent of all psychiatric beds, and 21 percent of all medical beds. The private, nonprofit sector has over two-thirds of all private long-term care beds. *Cliniques* are typically smaller than public hospitals, with an average of eighty beds.<sup>10</sup> *Cliniques* have traditionally emphasized elective surgery and obstetrics, leaving more complex cases to the public sector. With less than 20 percent of all acute care beds—public and private combined—the *cliniques* are responsible for 31 percent of all admissions, of which one-half are for surgery and one-third are for obstetrics.<sup>11</sup> However, over the past five years there have been a number of mergers, and some *cliniques* have begun to develop a capacity for cardiac surgery and radiation therapy.<sup>12</sup>

In France the ratio of nonphysician personnel per bed is higher in public hospitals (1.8) than in private hospitals (1.2) and, in the aggregate, is 40 percent less than in U.S. hospitals (1.6 versus 2.7).<sup>13</sup> This striking difference in hospital staffing may reflect a more technical and intense level of service in U.S. hospitals.<sup>14</sup> But it largely reflects differences between a national health insurance system and the U.S. system of health care organization and financing, which is characterized by large numbers of administrative and clerical personnel whose main tasks focus on billing multiple payers, documenting all medical procedures performed, and handling risk management and quality assurance activities—functions that are only seldom performed by most French hospital personnel.<sup>15</sup>

In summary, the numbers of physicians, hospital beds, and hospital personnel are higher in France than in the United States. But the technical level appears to be higher in the United States, where the proportion of

specialists in ambulatory care and the density of staffing in hospitals are higher than in France.

**National health insurance.** French national health insurance expanded from an initial program enacted in 1928 to the Social Security Ordinance of 1945, which covered salaried workers in industry and commerce and called for universal coverage. The process of expansion, however, took thirty years to complete.<sup>16</sup> National health insurance was progressively broadened to include farmers in 1961, the self-employed in 1966–1970, and all remaining uncovered groups in 1978.<sup>17</sup>

In contrast to the United States, with its three principal public health insurance programs (Medicare, Medicaid, and Civilian Health and Medical Program of the Uniformed Services, or CHAMPUS) and over a thousand private insurers each following different underwriting, benefit, and reimbursement policies, the French active population is covered by statutory, occupation-based, national health insurance schemes that are part of the social security system.<sup>18</sup> All dependents are automatically covered, as are the unemployed and the retired. National health insurance funds are organized into regional and local funds, all of which are, in French administrative law, private organizations charged with the provision of a public service. However, since their total annual expenditure exceeds that of the government's budget, the funds are closely supervised by the Ministry of Social Affairs as well as the Ministry of Finance and are therefore, in practice, quasi-public organizations. Health insurance premiums (payroll tax rates) are set by the government, as are the range of benefits, which are, with minor exceptions, uniform across national health insurance schemes. In addition, the central government oversees a process of national negotiations between the three principal national health insurance funds and representatives of health care providers. It thereby assures that all providers are subject to uniform reimbursement policies irrespective of the schemes under which patients are covered.

Eighty percent of the population—mostly salaried workers and their dependents—are covered under the General National Health Insurance Scheme, which is managed by the *Caisse Nationale de l'Assurance Maladie des Travailleurs Salariés* (CNAMTS). Nine percent of the population—mostly farmers, their salaried workers, and management and administrative personnel in agriculture and their dependents—are covered by two health insurance schemes, both managed by the *Mutualité Sociale Agricole* (MSA).<sup>19</sup> Six percent of the population—the self-employed—are covered by a fourth scheme managed by the *Caisse Nationale d'Assurance Maladie et Maternité des Travailleurs non-Salariés des Professions non Agricoles* (CANAM). The remaining 5 percent of the insured population and their dependents—miners, railway workers, subway workers, notaries public, the

clergy, artists, and others—are covered under eleven smaller schemes, all having their inherited and well-defended entitlements.

French national health insurance provides financial coverage for comprehensive services ranging from inpatient hospital care to outpatient services, maternity care, prescription drugs (including homeopathic products), thermal cures in spas, long-term care, cash benefits, and, to a lesser extent, dental and vision care. However, there remain small differences in benefits among occupational groups. The self-employed pay higher copayments for ambulatory care, while some of the smaller schemes, such as those for railway workers and miners, require lower copayments or provide services directly to their beneficiaries. Smaller funds with older, higher-risk populations are subsidized by the CNAMTS as well as by the government.<sup>20</sup>

*Benefits coverage and patient reimbursement.* In France there are no restrictions on provider choice—no preferred provider organizations (PPOs), no gatekeeper functions for primary care physicians, and no limits on the quantity of services covered under national health insurance. As a general rule, French patients pay the full fees directly to health care providers and subsequently obtain partial or more rarely full reimbursement from their health insurance funds.<sup>21</sup> The amounts reimbursed to patients under French national health insurance are calculated on the basis of negotiated rates minus a copayment, depending on the kind of service.<sup>22</sup> Charges borne by the patient, however, may differ from copayments. It is important to emphasize that close to one-third of French physicians have opted to charge fees in excess of the nationally negotiated charges. Also, there are exceptions to the rules about both direct payment and copayments.<sup>23</sup>

*Health care financing.* To finance benefits under French national health insurance for the 80 percent of the population covered by the CNAMTS, employers pay 12.8 percent of the wage bill, and employees pay 6.9 percent of their full salary, bringing the total payroll tax for health insurance to 19.7 percent of all wages.<sup>24</sup>

The funds raised by mandatory payroll taxes finance 74 percent of personal health expenditures in France (Exhibit 2). The remainder is financed by the central government, by patients' out-of-pocket payments, and by an elaborate range of private insurance schemes offering complementary insurance coverage. Eighty-four percent of the French population has private complementary health insurance coverage provided by commercial or nonprofit (mutual aid society) insurers.<sup>25</sup> Paradoxically, despite universal coverage in France, although aggregate out-of-pocket payments are 16 percent in comparison with 23.3 percent in the United States, for specific categories such as hospital and physician services, the percentage of out-of-pocket payments is actually higher in France than in the United States (Exhibit 2). In contrast, for prescription drugs, the share of out-of-

**Exhibit 2**  
**Personal Health Care Expenditures, By Type Of Care And Source Of Funds As A Percentage Of Total Spending, France And United States, 1990**

Type of care	France				United States		
	NHI <sup>a</sup>	Government	Private insurance	Out of pocket	Government	Private insurance	Out of pocket
Hospital care	89.2%	1.5%	1.9%	7.4%	54.6%	34.9%	5.0%
Physician services	62.1	1.0	8.6	28.3	34.1	46.3	18.7
Dental services	35.9	0.2	10.4	53.5	2.6	44.4	52.9
Pharmaceuticals	60.1	0.8	12.1	27.0	11.2	15.2	73.6
Total personal health care	74.0	1.1	6.1	18.8	41.3	31.8	23.3

**Sources:** French data are from ECO-SANTE France, version 3 (Paris: CREDES, 1991); U.S. data are from K. Levit et al., "National Health Expenditures, 1990," *Health Care Financing Review* (Fall 1991): 52.

**Notes:** Percentages do not always add to 100 since there are other minor sources of funds (for example, philanthropic sources) that are not displayed in the exhibit. "Government" includes state and local authorities; "private insurance" includes *mutuelles*, which are private, not-for-profit insurers. French out-of-pocket spending amounts include payments by private complementary insurers amounting to 2–3 percent of total personal health care expenditures, but the breakdown by type is not known. Thus, strictly speaking, direct out-of-pocket payments more likely represent 16 percent rather than 18.8 percent of total personal health care expenditures, while private insurance funding is closer to 9 percent of total personal health care expenditures.

<sup>a</sup> National health insurance.

pocket payments in the United States far exceeds that in France.

*Provider payment.* French physicians and other health professionals in private practice are paid directly by patients on a fee-for-service basis. *Cliniques* are still reimbursed on the basis of nationally negotiated daily fees and charges.<sup>26</sup> Public hospitals receive annual operating budgets, and unit prices for prescription drugs are set by an interministerial commission.

Charges for services provided by health professionals—whether in office-based private practice, in outpatient services of public hospitals, or in private hospitals—are negotiated every year within the framework of national agreements concluded between representatives of the health professions and the three principal health insurance funds.<sup>27</sup> These agreements establish the terms of payment according to a fee schedule.<sup>28</sup> The process of updating the relative value scale (RVS) to account for new procedures, changing technologies, and their effects on the costs of production is also the result of negotiations among the health professions, the national health insurance funds, and the government. The assignment of values (in current prices) is the object of even more heated negotiations, which have been at the center of the government's frustrated efforts to control the growth of health care spending. Once negotiated, the charges must be respected by all physicians, except for the one-third (sector 2 physicians) who either have chosen or have earned the right to engage in extra-billing.<sup>29</sup>

The payment of hospital care is different for private and public facilities. *Cliniques*, as well as private nonprofit hospitals, are reimbursed directly by the national health insurance funds on the basis of a negotiated daily



charge and a fee schedule for hospital-specific charges for such services as the use of an operating room. The remaining balance—a 20 percent copayment for the daily charge—is recovered directly by *cliniques* from patients. Physicians in *cliniques*, as in private practice, typically bill their patients directly; patients in turn are reimbursed according to the charges of the national fee schedule.

Since 1985 public hospitals are paid for their operating expenditures in monthly installments on the basis of prospectively set operating budgets.<sup>30</sup> The amount of the budget is set by the Ministry of Health.<sup>31</sup> It is paid, however, by national health insurance funds in proportion to the number of hospital bed days of their beneficiaries and, to a much smaller extent, by income derived from daily charges and copayments.<sup>32</sup> All physicians in public hospitals are compensated on the basis of salary payment and sessional fees.<sup>33</sup> In addition, for service chiefs, there is an option to engage in limited private practice within the public hospital.

Prices for prescription drugs allowable for reimbursement are set by a national commission that includes representatives from the Ministries of Health, Finance, and Industry. The commission sets prices for specific doses and unit packages, taking into account analogous drugs already on the market. For truly innovative products, prices are set in relation to the costs of production, including research costs and evaluation of therapeutic value.

**Health care services.** Existing data—whether they come from surveys or are byproducts of the administrative system—consistently indicate that the French, in comparison to Americans, consult their doctors more often, are admitted to the hospital more often, and purchase more prescription drugs. Yet health expenditures per capita are lower in France, since the average prices of physician services, prescription drugs, and hospital services are significantly lower than in the United States.

**Prices.** Despite the difficulties of comparing prices for goods and services that are not identical, there is much evidence that average prices of physician services, hospital services, and prescription drugs are lower in France than in the United States.<sup>34</sup> Since May 1992, for example, the average charges for an office visit to a French GP and a specialist are \$18 and \$25, respectively, in contrast to the average price of \$42 for an office visit to an American GP.<sup>35</sup> Comparison of physicians' incomes in the two countries gives further supporting evidence that French medical prices are relatively low. In 1990 the average annual net income, before taxes, of French physicians in private practice (\$69,300) was 42 percent of the annual income of their U.S. counterparts (\$164,300).<sup>36</sup>

While the average per diem rate for community hospitals in the United States in 1988 was estimated at \$590, in France the average would be closer to \$172.<sup>37</sup> Likewise, despite the difficulties of making price comparisons,

one can estimate that French pharmaceutical prices—the lowest in Europe—are, on average, 50 percent lower than American prices.<sup>38</sup>

*Utilization.* As in the United States, in the course of a year 78 percent of the French consult a physician at least once, but the number of physician visits per capita is significantly higher in France (8.3) than in the United States (5.5).<sup>39</sup> The average number of hospital days per capita is also higher in France than in the United States: 2.8 versus 1.2 in all hospitals and 1.4 versus 0.8 in short-stay hospitals. This difference derives from the higher hospital admission rate in France (23 percent) than in the United States (13.4 percent). The average length-of-stay in acute care hospitals is only slightly higher in France than in the United States (Exhibit 1).<sup>40</sup>

Consumption disparities for pharmaceuticals are even wider. On average, the French use twice as many drugs per capita as Americans do. French physicians prescribe drugs more often (for 75 percent of their consultations) than American physicians (60 percent) and order twice as many different drug products per prescription (an average of 3.2 versus 1.8).<sup>41</sup>

*Expenditures.* Despite their low average prices for medical goods and services, the French spend more for their health care than most of their European neighbors spend because they are high users of physician services, hospitals, and prescription drugs.<sup>42</sup> Yet comparative analysis of health expenditures among Organization for Economic Cooperation and Development (OECD) nations indicates that per capita spending on personal health care in France (\$1,650) was 43 percent less than that in the United States (\$2,867) in 1991.<sup>43</sup>

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## Assessment Of The French Model

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The French model of health care organization and national health insurance has not spared French policymakers from needing to tackle the problems faced by their American counterparts: cost control and inequalities in health status and access to care. But in terms of basic outcome and performance criteria, the French model appears strong compared with the U.S. model.

**Cost control.** The slowdown in the general economy and the problems of financing national health insurance and the rest of the social security system during the late 1970s led the French government to impose stringent measures to contain the rate of increase of health care costs. These measures aimed to control the medium-term growth of national health insurance spending by influencing the supply of as well as the demand for health services. Their probable effects may be examined by analyzing the evolution of health care spending between 1970 and 1990.

In contrast to U.S. experience, in France the average annual rate of

increase in health spending, deflated by the Consumer Price Index (CPI), declined over the past two decades (Exhibit 3). While the annual growth rate in real health spending from 1970 to 1975 was 7.2 percent, it dropped to 4.0 percent from 1985 to 1990. The equivalent U.S. rate rose from 5.0 percent to 6.0 percent.

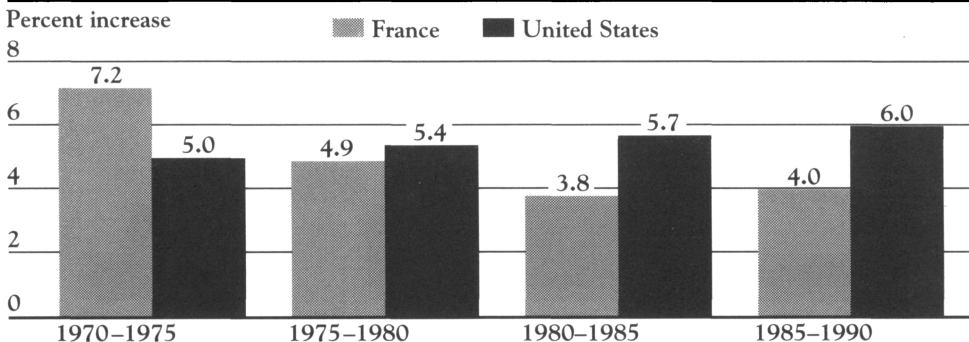
The most striking contrast in the rate of health spending increase between France and the United States is the difference in the rates of medical-specific inflation—the medical price index (MPI) deflated by the CPI (Exhibit 4).<sup>44</sup> The national agreements negotiated among representatives of the medical profession, the national health insurance funds, and the government in 1980 and 1985 appear to have been effective in maintaining low medical prices. The decrease in these rates in France from 1970 to 1985 and their low rate of increase from 1985 to 1990 reveal the success of French national health insurance in keeping professional charges, daily fees, and pharmaceutical prices low.

When one examines the evolution of health expenditures deflated by the MPI (the volume of health services), there is also clear evidence of deceleration in France, although not as much as successive governments have attempted to achieve (Exhibit 5). Despite the decelerating trend, the volume of health services in France has increased at higher average rates than in the United States and most other OECD countries. As for the success of cost control policies pursued in France, it is difficult to attribute the deceleration depicted in Exhibit 5 to the specific measures implemented because a slow but certain deceleration in volume has been documented since 1950.<sup>45</sup>

One noteworthy measure to control the volume of health services over the long run was the imposition of a limit, since 1971, on the number of

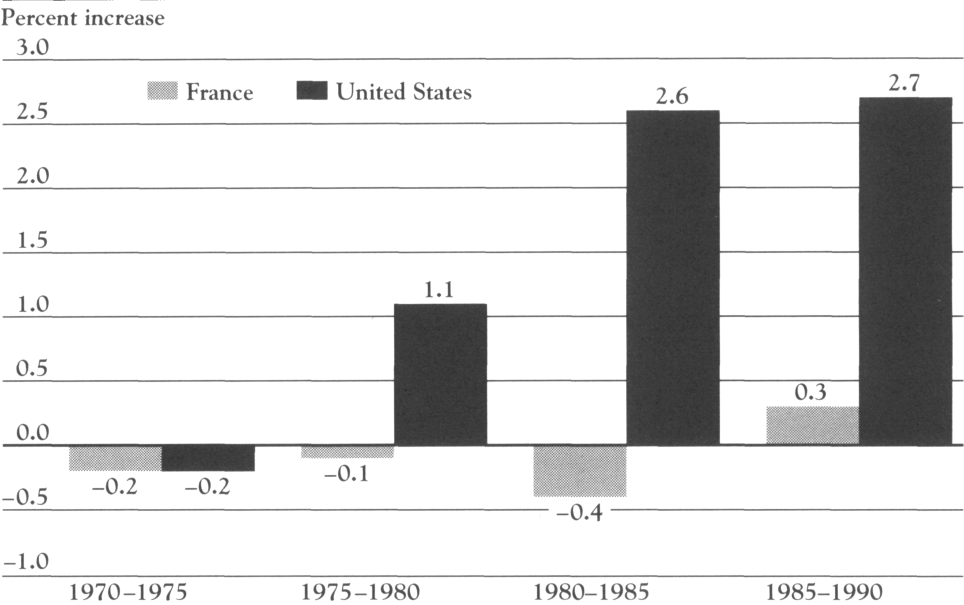
### Exhibit 3

#### Average Annual Rates Of Increase In Health Spending, Deflated By Consumer Price Index (CPI), France And United States, 1970–1990



Source: Organization for Economic Cooperation and Development (OECD) Health Data, 1991.

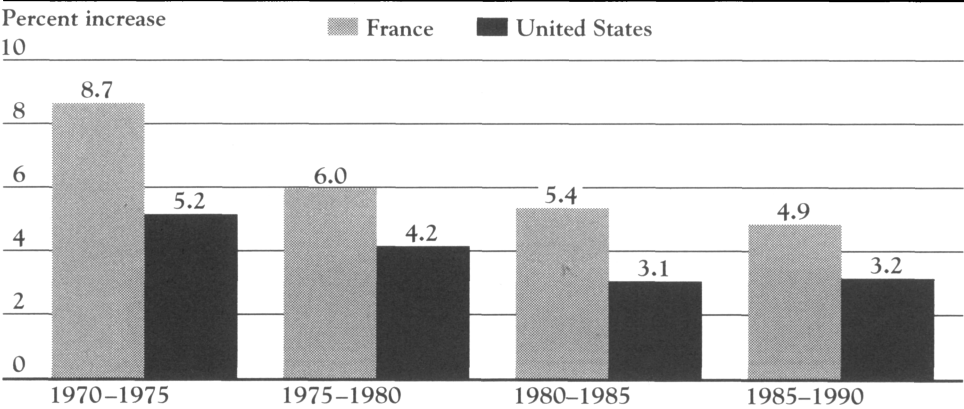
**Exhibit 4**  
**Average Annual Rates Of Increase In Medical-Specific Inflation, France And United States, 1970–1990**



Source: Organization for Economic Cooperation and Development (OECD) Health Data, 1991.

medical students admitted to the second year of medical school.<sup>46</sup> The policy reflects the current climate of opinion that assumes that there are too many physicians; however, it takes at least ten years for such a policy to

**Exhibit 5**  
**Average Annual Rates Of Increase In Volume Of Health Services, France And United States, 1970–1990**



Source: Organization for Economic Cooperation and Development (OECD) Health Data, 1991.

have any effect. Thus, while the number of physicians per capita is increasing more slowly in the 1990s (1.5 percent per year) than in the 1980s (3.2 percent per year), the limit has caused the number of students admitted to the second year of medical school to decrease, which may result in a physician shortage in the early years of the next century.

In the hospital sector there have been controls on construction and capital expenditures since the passage of the Hospital Law in 1970, which established hospital planning procedures and population-based service standards for the acquisition of new medical technologies. The most recent Hospital Law, passed in 1991, reinforces hospital planning and service standards to promote regionalization and controls over hospital investments.<sup>47</sup> As for hospital operating expenditures, since 1979 the government has reinforced its traditional price controls on daily fees in public hospitals by imposing a total expenditure ceiling for all public hospitals.

Over the past decade a number of measures have been undertaken to increase patients' out-of-pocket payments.<sup>48</sup> It is not possible to assess whether these measures actually contributed to restraining the use of medical care, but there is no doubt that the share of patient out-of-pocket payments (including private insurance premiums) in total personal health expenditures rose from 15.6 percent in 1980 to 19.3 percent in 1991.<sup>49</sup>

Beyond cost control measures aimed at influencing the supply of and demand for health services, recent policy has aimed directly at extending the cap on public hospital expenditures to private hospitals and ambulatory care. In 1992 national agreements were concluded with representatives of *cliniques*, laboratories, and nurses working in the private sector. These groups agreed to work within a nationally set expenditure target. As for physicians, after much handwringing and acrimonious debate, for the first time in the history of their negotiations with the government and the national health insurance funds, all three physician associations have accepted the principle of an expenditure target, as well as national practice guidelines that have yet to be defined.

Whether and how any of these agreements will actually be implemented remains to be seen. The concept of an expenditure target itself is ambiguous for physician services, for which patients' out-of-pocket payments already finance 28.3 percent of health spending. Will the target apply to all health spending with the risk of jeopardizing access to care by all patients and restricting physicians' clinical autonomy, or will it apply only to spending reimbursed under French national health insurance at the risk of reducing the level of coverage and possibly increasing inequalities in access to medical care? In addition to such conceptual issues, the information required to identify physicians who provide inappropriate services within the new expenditure targets is seriously deficient in France, given the absence

of reliable data on diagnoses and precise procedures performed.

Beyond these technical issues, formidable political obstacles stand in the way of implementing cost control policies. Despite efforts to control both demand for and supply of health services, French policymakers have encountered powerful resistance from the health professions and the general population. Some measures taken in the name of cost containment have been retracted in response to political opposition. In 1986, for example, when Health Minister Philippe Seguin imposed copayments for high-cost illnesses that previously were exempt, the elderly were severely hit. This contributed to the fall of Prime Minister Jacques Chirac's government in 1988, and the next government eliminated most of Seguin's measures.

**Inequalities in health.** Although French national health insurance has effectively eliminated significant financial barriers to medical care and despite universal coverage of the population, there remain wide disparities among social classes in patterns of medical care use; the distribution of health resources is also highly skewed in favor of urban areas and well-to-do regions. Moreover, as in other systems in which health outcome indicators have been compared with measures of socioeconomic status, in France there are significant inequalities.<sup>50</sup>

With regard to patterns of use, the most well-to-do and educated French people rely more on office-based private practice, particularly the services of specialists and dentists. The more disadvantaged groups, including laborers, make greater use of GPs and public hospitals. From 1960 to 1980 these disparities diminished, but since 1980 they have been exacerbated.<sup>51</sup> These disparities are matched by equally flagrant disparities in life expectancy. For example, during 1980–1989 the life expectancy of an engineer at age thirty-five (forty-five years) was higher by nine years (25 percent) than that of a manual worker (35.8 years).<sup>52</sup> Of course, differences in life expectancy reflect such factors as education, housing, and working conditions and cannot be attributed solely to differential access to medical care. But it is important to note that the medical system has been unable to compensate for these and other inequalities.

**Outcomes and performance criteria.** On the basis of life expectancy and infant mortality indicators, France comes out ahead of the United States and relatively high in comparison to the rest of Europe.<sup>53</sup> A girl born in France in 1991 could expect to live 81.1 years, in comparison to 79.1 years in the United States.<sup>54</sup> As for infant mortality, in 1991 there were 7.3 deaths for every thousand live births in France, in contrast to 8.9 per thousand in the United States.<sup>55</sup> These indicators are hardly complete enough to draw inferences on the relative health status of the French and American populations because they do not account for other dimensions of health such as functional autonomy and well-being. But they are the only

comparable data available. In terms of patient satisfaction, although polls in France have found different results depending on the nature of the questions posed, a 1990 comparative survey suggests that France ranks high in comparison to the United States.<sup>56</sup> In the United States 60 percent of the population felt that fundamental changes are needed; in France 42 percent of the population shared this feeling.<sup>57</sup>

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### Concluding Observations

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There are two striking differences between the health systems in France and in the United States: the universal coverage of the French population under a national health insurance program, and the lower level of per capita health spending in France despite higher outcome and performance indicators. Over the past five years, however, French policymakers have had less success than other nations—notably Britain, Canada, and Germany—in containing their rising health care costs. Health care prices have effectively been kept low, but the volume of services—whether measured in physical quantities (use of services) or in health spending deflated by the MPI—remains high in comparison with the United States. Nevertheless, much like the Canadian experience, price controls in France have been stronger than the volume response, which in no small part explains why health care expenditures in France are lower than in the United States and have grown more slowly over the past fifteen years.<sup>58</sup>

The French consult their doctors more often than Americans do, are admitted to the hospital more often, and purchase more prescription drugs. Despite wide disparities among French social classes in mortality and in patterns of medical care use, when judged on basic outcome measures (life expectancy and infant mortality) and polls of consumer satisfaction, the French health care system comes out ahead of the U.S. system.

French national health insurance allows for free choice of providers and clinical autonomy of physicians even more so than in the United States. French physicians are never asked to play gatekeeper functions and are not subject to the kind of utilization review and quality assurance bureaucracy that has transformed the working lives of American doctors. But this freedom has at least two consequences. First, for patients, direct payment for most ambulatory care, the growth of extra-billing, and out-of-pocket payments amounting to almost one-fifth of personal health care expenditures are the quid pro quo for universal national health insurance with no restrictions on patient-demanded services. Second, in exchange for more clinical autonomy than American providers now enjoy and a national health insurance system with universal coverage, French physicians and other providers have learned to live with lower prices and lower incomes

than their American counterparts receive.

Health care reform in France is likely to strengthen expenditure targets and utilization controls. The *Loi Teulade*, passed 4 January 1993, calls for national practice guidelines and routine collection of information on patient diagnoses and physicians' procedure codes. The rapid growth of health spending and volume of services no doubt will continue to put pressure on French government officials to tolerate sector 2 physicians and rising co-payments. Along with opportunities for the growth of *cliniques*, this will be justified in the name of liberalism and pluralism. On the other hand, the French commitment to solidarity will surely constrain these developments. It will keep prices low, keep limits on the percentage of sector 2 physicians, cap payroll tax rates for all national health insurance funds, and assure uniform payment rates to providers across all funds.

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## NOTES

**Author's Note:** Authors are in alphabetical order. Unless otherwise indicated, statistical data for France are from ECO-SANTE France (ESF), a software package that is updated every year by the *Centre de Recherche, d'Etudes et de Documentation en Economie de la Santé*—CREDES). The sources include the most up-to-date, sometimes not yet published data from the Ministry of Health, CNAMTS, INSEE, and INED. For the United States, data are from *Health, United States, 1991*, DHHS Pub. no. (PHS)92-1232 (Hyattsville, Md.: U.S. Public Health Service, National Center for Health Statistics, 1992).

1. In 1991, 14 percent of the French population was older than age sixty-five, compared with 12 percent in the United States. These figures are from the Organization for Economic Cooperation and Development's (OECD's) Health Data software package for international comparisons of health systems, prepared under the direction of Jean-Pierre Poullier (OECD) and Simone Sandier (CREDES), Paris, 1991.
2. OECD Health Data, 1991.
3. V.G. Rodwin, "The Marriage of National Health Insurance and *la Médecine Libérale* in France: A Costly Union," *Milbank Memorial Fund Quarterly* 59, no. 1 (1981): 16-43; and V.G. Rodwin, "Management without Objectives: The French Health Policy Gamble," in *The Public/Private Mix for Health*, ed. G. McLachlan and A. Maynard (London: The Nuffield Provincial Hospitals Trust, 1982). For other more recent papers on the French health care system, see U.S. General Accounting Office, *Health Care Spending Control: The Experience of France, Germany, and Japan*, GAO/HRD 92-9 (Washington: GAO, November 1991); P. Godt, "Doctors and Deficits: Regulating the Medical Profession in France," *Public Administration* (Summer 1985); and P. Godt, "Health Care: The Political Economy of Social Policy," in *Policy Making in France*, ed. P. Godt (London and New York: Pinter, 1989), 191-207; J.J. Rosa and R. Launois, "France," in *Comparative Health Systems: The Future of National Health Systems and Economic Analysis*, ed. J.J. Rosa (Greenwich, Conn.: JAI Press, 1990); S. Sandier, *Comparison of Health Expenditures in France and the United States*, Vital and Health



- Statistics, Series 3, no. 21 (Hyattsville, Md.: NCHS, June 1983); and S. Sandier, "Private Medical Practice in France: Facts and Policies," *Advances in Health Economics and Health Services Research*, vol. 4 (Greenwich, Conn.: JAI Press, 1983).
4. Even if one includes internal medicine, obstetrics, and pediatrics in primary care, in the United States primary care physicians represented 47 percent of physicians in 1989, in contrast to 62 percent in France.
  5. D. Ceccaldi, *Les institutions sanitaires et sociales* (Paris: Foucher, 1989), 29.
  6. Ibid., 174. As of 1 March 1992 the family allowance paid to all pregnant women, known as *Allocation Pour le Jeune Enfant* (APJE), beginning in the fifth month, was equal to Fr 891 per month. The contingent conditions and spacing of the prenatal visits are strict, and failure to comply reduces and sometimes eliminates the family allowance during pregnancy. *Caisse Nationale d'Allocations Familiales*, Paris, 1992.
  7. These figures obviously are not comparable. A large part of this disparity may be explained by the fact that French hospitals, more so than their U.S. counterparts, sometimes provide long-term care for the elderly. But even if one compares only short-stay beds, there are still more in France (5.1 per thousand) than in the United States (4.2 per thousand). The U.S. data on beds are divided by the resident population of 248,239,000 in 1991.
  8. Two-thirds of the private nonprofit beds are in institutions that participate on a contractual basis in the public hospital service.
  9. G. de Pourville and M. Renaud, "Hospital System Management in France and Canada: National Pluralism and Provincial Centralism," *Social Science and Medicine* 20, no. 2 (1985): 153–166.
  10. *Annuaire Statistique*, Ministère de la Santé, 1992.
  11. Ibid.
  12. Between 1985 and 1989 the rate of growth of high-technology equipment—for example, scanners, magnetic resonance imaging (MRI) machines, and lithotriptors—has been higher in the proprietary sector than in public hospitals. For example, the number of scanners tripled in *cliniques* and increased by only 60 percent in the public sector. Between 1987 and 1989 lithotriptors in *cliniques* increased by 85 percent and MRI machines by 40 percent, whereas in the public sector they increased by 32 percent and 20 percent, respectively. *Le Monde*, 28 April 1992, 36.
  13. OECD Health Data, 1991.
  14. Some evidence in support of this thesis may be found in a comparison of intensive care units in French and U.S. hospitals. For a patient group with the same severity of illness, invasive monitoring was used less for French than for U.S. patients. W. Knauss et al., "A Comparison of Intensive Care in the U.S.A. and France," *The Lancet* (18 September 1982): 642–646.
  15. For a case-study comparison of an American hospital and a French hospital, see V.G. Rodwin et al., "A Comparison of Staffing at Coney Island and Louis Mourier Hospitals," in *Public Hospitals in New York and Paris*, ed. V.G. Rodwin et al. (New York: New York University Press, 1992).
  16. J.J. Dupeyroux, *Droit de la sécurité sociale* (Paris: Dalloz, 1993); and J.P. Dumont, *La sécurité sociale, toujours en chantier* (Paris: Les Editions Ouvrières, 1981).
  17. In 1991, 99.4 percent of the French resident population was covered under national health insurance, leaving 300,000 to 400,000 people without coverage. These people are considered medically indigent and are cared for in public facilities that are reimbursed from public funds. Dupeyroux, *Droit de la sécurité sociale*.
  18. Social security in France comprises an assortment of quasi-autonomous national funds ranging from pensions to workers' compensation, family benefits, and health insurance.
  19. For more detail on the MSA, see F. Mandersheid, *Une autre sécurité sociale: La mutualité sociale agricole* (Paris: L'Harmattan, 1991).

20. For example, the MSA covers only 20 percent of its budget from payroll tax contributions of its employed beneficiaries. Forty percent comes from the General National Health Insurance Scheme for so-called demographic compensation. Another 10 percent is a direct subsidy from the government budget, and the remainder is raised through other taxes (on agricultural products), other contributions, and interest on capital. These figures are from the *Budget Annexe des Prestations Sociales Agricoles* (BAPSA), *Département Etudes Economiques et Financières* (MSA, 1993). Each of the eleven smaller health insurance schemes benefits from demographic compensation, all in the name of solidarity. For example, the payroll tax contributions of the employed clergy covered 60 percent of their scheme's expenditures in 1991; the remainder was transferred by the General National Health Insurance Scheme. Figures are from *Les Comptes de la Sécurité Sociale*, *Commission des Comptes de la Sécurité Sociale* (July 1992).
21. To be eligible for reimbursement under national health insurance, medical goods and services must be registered on a national list of prescription drugs, appliances, prostheses, and medical procedures. Also, all services and procedures must be performed or prescribed by a physician, and all providers must be certified health professionals, medical facilities, or pharmacies.
22. The copayment in France is known as a *ticket modérateur*. Under the General National Health Insurance Scheme, the copayment is 25 percent for physician services, 35 percent for private nursing services and laboratory tests, and typically 30 percent for prescription drugs. Essential drugs are exempt from copayments, but the copayment is set at 60 percent for so-called comfort drugs. Patients in public and private hospitals typically are required to pay 20 percent of the per diem rates plus a daily fee (roughly \$10) to cover meals. Patients in *cliniques* also pay copayments for all physician services, procedures, and laboratory tests.
23. Public hospitals, most *cliniques*, and health centers generally are exceptions to the practice of direct payment from patients to providers. Patients are exempted from copayments in the following cases: (1) for major medical or surgical procedures, defined as being equal to or exceeding the approximate severity of an appendectomy, coded as KC-50 in the French RVS (as of January 1993, the value of KC was approximately Fr 13, making the fee for KC-50 equal to approximately \$125); (2) for maternity care and medical care resulting from accidents at work; (3) for hospital stays exceeding thirty days; and (4) for serious, debilitating, or chronic illness. There are thirty illnesses for which all patients are exempt from copayments. The so-called thirty-first illness includes any degenerative condition not included among the thirty illnesses. The so-called thirty-second illness refers to multiple conditions (comorbidities) that make patients severely disabled. The exemption from copayments for the thirty-first and thirty-second illnesses is granted only upon approval of physicians working for health insurance funds, so-called medical controllers.
24. These rates have been in effect since January 1992. Similar rates apply for the population of salaried agricultural workers and special occupations with their own health insurance schemes. Farmers and the self-employed are taxed largely on the basis of their declared incomes. It is important to note that in addition to health insurance benefits, the revenues raised under the General National Health Insurance Scheme cover cash benefits (salary continuation) as well as subsidies to the MSA and smaller health insurance funds with older, higher-risk beneficiaries (see Note 20).
25. Complementary health insurance coverage is generally linked to occupation. The most well-to-do tend to have the most complete coverage as well as the most supplementary benefits. Of the 84 percent of the population subscribing to complementary health insurance policies, 61 percent join mutual aid societies (*mutuelles*), 24 percent subscribe to private commercial insurance, and 15 percent have a *caisse de prévoyance*. A. Bocognano et al., *Enquête sur la santé et la protection sociale en 1990: Premiers résultats*

- (Paris: CREDES, 1991).
26. The new agreement in 1991 among *cliniques*, the national health insurance funds, and the government called for the use of case-mix criteria as well as expenditure targets in the determination of future per diem rates. J.C. Stéphan, *Séminaire d'information de l'UHP* (Paris: Formamed, 1992).
  27. The first national agreements with physicians date from 1960 and differ according to region. Since 1971 the agreements have lasted an average of five years. The negotiation process has most often been acrimonious, complicated, and long, revealing the conflicts among the government's objectives of cost containment, payers' concerns about access, and the profession's attachment to autonomy and purchasing power. V. Rodwin, H. Grable, and G. Thiel, "Updating the Fee Schedule for Physician Reimbursement: A Comparative Analysis of France, Germany, and Canada," *Quality Assurance and Utilization Review* (February 1990): 16–24; and D. Wilsford, *Doctors and the State: The Politics of Health Care in France and the United States* (Durham, N.C., and London: Duke University Press, 1991).
  28. The French fee schedule classifies all procedures eligible for reimbursement according to an RVS. The charge for each procedure is calculated by multiplying its relative value by the negotiated rate (conversion factor). Thus, for example, the charge for an appendectomy or simple hernia operation, coded as KC-50, will be ten times the charge for removal of an ingrown toenail, coded as KC-10. The French RVS is known as the *Nomenclature Générale des Actes Professionnels* (NGAP), originally written in 1930 by a physician trade union, the *Confédération des Syndicats Médicaux Français*. Its procedures are classified around so-called key letters: C signifies a consultation with a general practitioner; Cs, a consultation with a specialist; and V, a home visit by a general practitioner. B signifies laboratory tests; Z signifies radiological procedures; K signifies diagnostic procedures; and KC signifies surgical procedures. Since a letter followed by a coefficient usually corresponds to many different procedures, it is impossible for fund administrators to know exactly for what procedures they are paying.
  29. Three groups of physicians have the right to engage in extra-billing: (1) those who have opted out of the system (0.4 percent of physicians), for whom the national health insurance funds will reimburse nothing to patients; (2) those who before 1979 had earned the right to exceed negotiated charges due to their status and prestige in the medical community (3.4 percent of physicians); and (3) those who since 1980, in exchange for giving up certain health benefits and tax write-offs, choose to join the so-called sector 2 and thereby earn the right to exceed negotiated charges so long as they do so with "tact and measure" (25.7 percent of physicians). See "Le secteur libéral des professions de santé, premiers résultats," *Bloc note statistique* 68 (Paris: CNAMTS, May 1993). An increasing number of physicians have joined sector 2, particularly specialists in large cities. Although *tact and measure* has never been defined, surveys indicate that extra-billing represents approximately 10 percent of total physician income and that the average extra charge is 50 percent above the allowed fee. For example, in 1992, for an average charge of Fr 93.6 (for a GP visit, patients paid an average fee of Fr 138.8 for GPs in sector 2), patients were reimbursed 75 percent of 93.6 (Fr 70.2) and paid Fr 68.6 (138.8 minus 70.2) from complementary private insurance reimbursement or out of pocket. Thus, the official rate of reimbursement for GP visits under national health insurance (75 percent) is considerably higher than the actual rate (49.4 percent). Patients who visit physicians in the second and third categories are reimbursed the full amount of charges less copayments, thus leaving them to finance the remainder themselves from complementary insurance policies or out of pocket.
  30. G. de Pouvourville, "Hospital Reforms in France under a Socialist Government," *The Milbank Quarterly* 64, no. 3 (1986): 392–413.
  31. For the time being, this amount is calculated largely on the basis of last year's budget,

- an analysis of hospital activities, and an allowable rate of increase. Meanwhile, hospitals are collecting case-mix information that eventually may be used in budget setting.
32. For outpatient consultations in public hospitals, the patient has the option of advancing only the amount of the copayment, and the hospital recovers the rest directly from the patient's health insurance fund.
  33. The sessional fees are the basis of payment largely to part-time physicians working in private practice—*attachés*—who have an affiliation with specific service units in the public hospital to work a certain number of half-day shifts, most often for outpatient consultations or procedures. These physicians in France are the closest French equivalent to attending physicians in private hospitals in the United States.
  34. We have been using the term *charges* to indicate negotiated payment rates for physician services. Physicians with the right to exceed these charges may bill patients for their fees. Average physician prices therefore are higher than charges as estimated in the following note. In converting francs to dollars, throughout this paper we have used the rate of 5.5 francs to the dollar.
  35. The allowable charge for an office visit to a French general practitioner is Fr 100; to a specialist, Fr 140. Even if one adds the charges for simple laboratory tests, often performed in a doctor's office in the United States but always referred to a private laboratory in France, the average French price for a GP office visit is still at least 27 percent lower. The average charge for GP services in 1991 was Fr 137. To this we add 20 percent for laboratory services and 10 percent for extra-billing, bringing the figure to Fr 183, or about \$33.
  36. The figure for the average annual income of U.S. physicians is from the American Medical Association, as cited in *The Washington Post*, 21 May 1992. The average annual income of French physicians is Fr 381,200. Differences in national income between France and the United States explain only part of this disparity, since the ratio of average physician income to average per capita income in 1990 was 4.4 in France and 7.9 in the United States. Data on per capita income (GDP per capita) in adjusted U.S. dollar purchasing power parities are from OECD Health Data: \$18,219 for France; \$21,400 for the United States.
  37. The average per diem costs (including physicians' salaries) were Fr 1,023 (\$186) in 1988 for all public community hospitals and Fr 638 for private hospitals (not including physicians' salaries). Adding Simone Sandier's estimate of Fr 170 for physicians' fees in private hospitals, the equivalent per diem costs would be Fr 808. The weighted average comes to \$172.
  38. CREDES, Paris.
  39. U.S. data are from NCHS, *Current Estimates from the National Health Interview Survey*, 1990, Vital and Health Statistics, Series 10, no. 181 (Hyattsville, Md.: NCHS, December 1991). French GPs account for 59 percent of all visits to physicians, compared with 30 percent in the United States. S.M. Schappert, *National Ambulatory Medical Care Survey: 1990 Summary*, Advance Data from Vital and Health Statistics (Hyattsville, Md.: NCHS, 30 April 1992). If U.S. physicians who specialize in internal medicine are added, the proportion comes to 43.5. This suggests that the French make only slightly fewer annual visits to specialists (3.4) than Americans do (3.85). But home visits, which have practically disappeared in the United States, account for 17 percent of all physician services in France. In contrast, hospital outpatient consultations in France were only 5 percent of all physician visits, compared with 13 percent in the United States (NCHS, *Current Estimates from the National Health Interview Survey*).
  40. U.S. data are from NCHS, *National Hospital Discharge Survey*, Advance Data from Vital and Health Statistics (3 March 1993).
  41. In France 48 percent of personal health expenditures goes to inpatient hospital care, leaving 30 percent for ambulatory care and 21 percent for medical goods—largely drugs

- (18 percent)—in contrast to 9.3 percent for drugs in the United States.
42. OECD Health Data, 1991.
  43. Ibid. The French figure is calculated in OECD purchasing power parities. The cost difference is much greater than the disparity in GDP per capita between France (\$18,219) and the United States (\$21,400) and explains why French health care expenditures in 1991 were 9.1 percent of GDP, compared with 13.4 percent in the United States. The GDP per capita figures are calculated by dividing the GDP of each country by its population and adjusting the French figure by purchasing power parities.
  44. The MPI includes a market basket of goods and services in the health sector. Hospital prices have increased far more than pharmaceutical prices in both countries.
  45. A. Mizrahi, A. Mizrahi, and S. Sandier, "Le système de santé en France de 1950 à 1989," *Journal d'Economie Médicale* 9, no. 8 (1991): 379–405.
  46. This limit, known as a *numerus clausus*, has been progressively lowered from 8,588 to 3,750 students, which now corresponds to 2.5 percent of physicians now in practice.
  47. The new law's planning procedures, known as the *carte sanitaire*, suffer from the same problems as the old law: They are not linked to reimbursement incentives under national health insurance. See V.G. Rodwin, "On the Separation of Health Planning and Provider Reimbursement: The U.S. and France," *Inquiry* (Summer 1981): 139–150.
  48. Copayments were increased for laboratory procedures, selected prescription drugs, and certain physical therapy services. Also, the allowance of extra-billing by sector 2 physicians contributed to decreasing health insurance coverage for expenditures on physician services. In addition, some prescription drugs were eliminated from the list of eligible drugs for reimbursement, and the daily \$10 fee for hospitals was imposed to cover a portion of food and lodging.
  49. This is supported by the fact that national health insurance expenditures increased at a lower rate than personal health care expenditures between 1980 and 1991.
  50. V.G. Rodwin, "Inequalities in Private and Public Health Systems: The United States, France, Canada, and Britain," in *Ethnicity and Health*, ed. W. Van Horne (Milwaukee: University of Wisconsin System American Ethnic Studies, 1989).
  51. A. Mizrahi and A. Mizrahi, *Evolution récente des disparités de consommation médicales de soins de ville* (Paris: CREDES, May 1991).
  52. There is a clear class gradient down from professors and engineers, to executives, liberal professions, mid-level managers, craftsmen, and small-business personnel to employees, laborers, and salaried agricultural workers. G. Desplanques, "Les cadres vivent plus vieux," *INSEE Première* 158 (August 1991); and G. Desplanques, "L'inégalité sociale devant la mort," *Economie et Statistique* 162 (January 1984).
  53. U.S. data are from the NCHS. Data for the rest of Europe are from OECD Health Data. The 1990–1991 unpublished U.S. data were communicated by Jack Feldman of the NCHS.
  54. From 1981 to 1991 life expectancy for women increased 2.6 years in France, compared with 1.8 years in the United States; for men it increased 2.6 years, compared with 1.8 years (U.S. data are from the NCHS; data for 1990–1991 are provisional figures). For French men, the situation is not as good. Their life expectancy surpassed that of American men beginning in 1984 but is only 0.8 years greater (73.0 versus 72.2). In both countries life expectancy has increased, but over the past ten years the progression has been faster in France.
  55. U.S. data are from the NCHS.
  56. R.J. Blendon et al., "Satisfaction with Health Systems in Ten Nations," *Health Affairs* (Summer 1990): 185–192.
  57. Ibid.
  58. M. Barer, R. Evans, and R. Labelle, "Fee Controls as Cost Control: Lessons from the Frozen North," *The Milbank Quarterly* 66 (1988): 1–64.