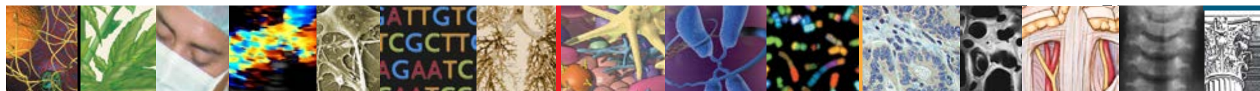

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Perspective

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INTERNATIONAL HEALTH CARE SYSTEMS

Universalism, Responsiveness, Sustainability — Regulating the French Health Care System

Monika Steffen, Ph.D.

France is known for the quality and generosity of its health care, which received top ranking from the World Health Organization in 2000.[1] Public health insurance covers the entire population and all fees for serious or chronic illnesses; patients can choose their doctor and hospital; and doctors can choose the treatment best suited to their patients, including highly expensive treatments. The system favors curative intervention, as recently illustrated by a political decision providing funding for free provision of sofosbuvir to patients with hepatitis C. Prevention campaigns account for only 2.3% of current health expenditures. Two sets of ethics govern the system: the French conception of public service, based on equal treatment for all, and the ethics of the medical profession, which support doctors' independence from public authorities and exclusive devotion to their patients' interests and needs. These values have resulted in extensive use of health care and therefore high expenditures (see table).

An interactive graphic is available at NEJM.org

Health care absorbs a large proportion of the country's gross domestic product relative to that in other countries in the Organization for Economic Cooperation and Development, but in terms of per capita health expenditures, France ranks somewhat lower. The difference reflects the weakness of the economy.[2] High unemployment has caused a chronic deficit in the public health insurance fund, which relies on work-related contributions and taxes. Public hospitals have accumulated extensive debt, having made large investments in improvements requested by the government but only partly covered by public funding.[3] Hospitals were encouraged to take out bank loans that they're now struggling to repay because their reimbursement rates have been lowered in an effort to limit health insurance expenditures. Finding a way out of this financial trap would require a better-performing economy or structural changes in the way health care funds are raised and distributed — changes that no government has dared to make. The French public defends the system, which they perceive as public despite its significant private dimensions.

This public–private mix creates complexity. Care is provided by public hospitals, private not-for-profit hospitals, and commercial hospitals, as well as a large am-

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Characteristics of the Health Care System and Health Outcomes in France.*

Variable	Value
Health expenditures	
Per capita (U.S.$)	4,690
Percentage of GDP	11.7
Out-of-pocket (as % of private health expenditures)	32.1
Public sources (% of total)	76.9
Health insurance	
Percentage of population covered	100 (public insurance); 96 (complementary insurance)
Source of funding	Employers through payroll tax, enrollees through a tax on all income that is earmarked for the public system
Average physician income (U.S.$ [multiple of average French wage])	
Self-employed general practitioner in 2011	79,800 (2.9)
Self-employed specialist in 2011	137,000–159,000 (4.9–5.7)
Salaried physician at public hospitals (mostly specialists)	80,500 (2.9) for doctor; 113,000 (4.0) for medical professor
Generalist–specialist balance in 2013 (%)	
Generalists	46.7
Specialists	53.3
Access	
No. of hospital beds per 10,000 population in 2011	64 (34 of which are for acute medical care)
No. of physicians per 1000 population	3.2
Total government health expenditures spent on mental health care in 2011 (%)	12.9
Primary care physicians using electronic medical records (%)	67
Life and death	
Life expectancy at birth (yr)	83
Additional life expectancy at 60 yr (yr)	25
Annual no. of deaths per 1000 population	9
No. of infant deaths per 1000 live births (up to 1 yr of age)	3.5
No. of maternal deaths per 100,000 live births†	10.5
Fertility and childbirth	
Average no. of births per woman	2
Births attended by skilled health personnel (%)	97
Pregnant women receiving any prenatal care (%)	100
Preventive care	
General availability of colorectal-cancer screening at primary care level	Yes
Children 12–23 mo of age receiving measles immunization in 2013 (%)	89
Prevalence of chronic diseases (%)	
Diabetes in persons 20–79 yr of age in 2013	5.4
HIV infection in persons 15–49 yr of age in 2014	0.4
Prevalence of risk factors (%)	
Obesity in adults ≥18 yr of age in 2014	23.9
Overweight or obesity in children ≤5 yr of age in 2013	15.1
Smoking in 2013	28

* Data are from the World Bank; the French National Institute of Statistics and Economic Studies (INSEE); la Direction de la recherche, des études, de l'évaluation et des statistiques (DREES); the Organization for Economic Cooperation and Development; the Commonwealth Fund; and the World Health Organization and are for 2012, except as noted. GDP denotes gross domestic product, and HIV human immunodeficiency virus.
† This number includes deaths during pregnancy and for up to 1 year after giving birth that are attributable to causes linked to pregnancy and birth.

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Pregnancy and Childbirth

A healthy 23-year-old woman is pregnant for the first time.

When Ms. Bernard discovers she's pregnant at a young age — 23, when the average age for a first birth in France is about 28 — she knows she can choose to have an abortion, which is legal and provided free of charge, along with psychological counseling if she wants it. But she decides she wants to become a mother and so turns to an independent gynecologist to monitor her pregnancy. The gynecologist opens a maternity record and organizes a meeting with a midwife, who sets up a support network of various professionals for the pregnancy, delivery, and postnatal period and arranges for educational sessions with other expectant parents. Before her fourth month, Ms. Bernard must report her pregnancy to the health care and family branches of the social security institution, so they will provide financial allowances.

Ms. Bernard has monthly appointments and is screened for toxoplasmosis, rubella, diabetes, blood group, and albumin level and undergoes cytobacteriologic tests. Screening for syphilis is compulsory in the first month; for HIV and Down's syndrome there is systematic but not compulsory screening, which Ms. Bernard opts to forgo. Ultrasound scans are performed in the third, fifth, and eighth months, and since everything seems fine, Ms. Bernard has no additional ultrasound scans. She chooses the hospital where she wants to give birth and must go to that institution for her antenatal care in the eighth and ninth months.

Like most women in France, Ms. Bernard has her baby in the hospital under local anesthesia; the vaginal delivery is performed by a midwife, with an obstetrician present. Mother and baby remain in the hospital for 3 days.

After they return home, a midwife visits them daily for the first 12 days, and Ms. Bernard attends compulsory medical visits for herself and her daughter 6 weeks later. She also takes advantage of the 10 sessions of postpartum physical therapy to which she's entitled.

The public health insurance maternity scheme fully covers all medical and paramedical expenses from Ms. Bernard's sixth month of pregnancy onward. It also pays her salary during maternity leave (16 weeks) and for 11 working days of leave for her partner. The family allowance fund provides a "birth bonus" of €923 (about $1,000) for every child born, as well as a child-care allowance. Furthermore, each parent who temporarily stops working receives a monthly allowance of €325 to €566 (about $350 to $600) for up to 6 months for the first child and up to 18 months for each subsequent child.

bulatory care sector composed of independent practitioners, of whom 53% are general practitioners (GPs) and 47% specialists. There are two distinct policy domains: the government sets payment rates for hospital care, whereas independent doctors negotiate collective agreements with the health insurance fund. Health insurance does not, however, cover the full amount of care expenditures, except in cases such as care during pregnancy, for specified serious or chronic diseases, and for poor patients who are enrolled free of charge. On average, insurance covers two thirds of expenditures, though only a nominal amount for devices such as eyeglasses and hearing aids. Most people (96%), therefore, also subscribe to a private complementary health insurance plan. Insurance is thus a two-tiered system, with a statutory portion and a complementary private one.

France's institutional patchwork makes coordinating care difficult. Independent practitioners, paid on a fee-for-service basis, have little incentive to engage in coordination, data sharing, and the like. They are still paid directly by patients, who are later reimbursed by insurance. A law passed in December 2015 will require physicians to accept third-party payment, but this law is opposed by most doctors — especially private specialists, many of whom are entitled to charge more than the official insurance rates. Furthermore, independent doctors can set up practices wherever they want, with no obligations regarding geographic distribution, opening hours, or population health. Incomplete reimbursement, the requirement for up-front payment, and unequal distribution of ambulatory care are the main barriers to equal access. Public hospitals are the universal entry point, both for poor populations that use emergency services to avoid the financial constraints of the ambulatory care sector and for highly specialized consultations, which don't require referrals when given in public hospitals. Regional hospitals, accessible under the same conditions as other public hospitals, employ France's top physicians.

The past 20 years have witnessed many reforms introducing approaches adopted elsewhere, such as activity-based funding for hospitals, best-practice guidelines, reductions in the number of medical students, introduction of flat payment rates, changes in reimbursement rates for medicines, and removal of medications from the list of reimbursed treatments. Since doctors prescribe freely, pharmacies have been given the right and financial incentives to replace prescribed brand-name products with generics.

Another milestone was the introduction of gatekeeping in 2004. Until then, patients could consult as many doctors as they wanted, with direct access to specialists. Now they must designate a "referring" physician (usually, but not always, a GP). Patients can still seek care directly from other doctors, but they're reimbursed at a lower rate if they lack a referral. A limited health budget, enacted in 1997, finally began to be enforced in 2010. The rationale behind these measures is tighter regulation of the care paid for by public insurance and transferring of some expenditures to private insurance.

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Myocardial Infarction

A 55-year-old man with no other serious health problems has a moderately severe myocardial infarction.

Mr. Martin's wife, fearing that her husband is having a heart attack, calls 15, the emergency number. The call is answered by a doctor, who hears her description of the symptoms and agrees that myocardial infarction is likely; he locates the patient and immediately sends the Service Mobile d'Urgence et de Réanimation (SMUR) — an ambulance or helicopter staffed by an emergency physician, a nurse, and a driver or pilot. The SMUR team confirms the diagnosis and begins treating Mr. Martin with anticoagulants and analgesics, ready to defibrillate if necessary — or to administer thrombolytic agents if there is a long delay before they can get him to a cardiology center. Fortunately, in this case, they transport their patient in less than 15 minutes to a 24/7 interventional cardiac unit, where they find a hospital team already informed and prepared for intervention.

Mr. Martin undergoes coronary angioplasty through the radial artery, and two stents are placed. He spends 24 hours in the specialized intensive care unit and 4 more days in the hospital, where he is monitored closely for any complications. Long-term aspirin therapy is begun while he's there.

Mr. Martin leaves the hospital with a treatment plan for his GP and cardiologist. Part of the plan is cardiac rehabilitation to reduce his cardiovascular risks related to diet, smoking, and exercise and to facilitate his return to work. His care — including surgery, transport, and rehabilitation — is fully covered by public health insurance for 6 months, and afterward according to the usual specifications of the health insurance program. All patients are treated the same way, including nonresidents. No payment is required at the emergency stage; any administrative or monetary matters are considered later.

To secure universal access and better coordinate health care resources, cost containment has been accompanied by two important institutional innovations. First, France's medical safety net was reformed in 2000: the medical assistance program for the poor, in which access and benefits varied by location, was abolished and replaced with a unified national "Universal Medical Coverage."[4] This system provides free enrollment in both statutory health insurance and a complementary insurance plan for all residents with income below a certain threshold, who receive free care. People with incomes up to nearly 30% above the threshold receive a voucher to help them purchase private complementary insurance. Some 11% of the population benefits from these schemes.

Though the system was created with funding from the government and public health insurance, with a small voluntary contribution from complementary health insurers, it's now funded entirely by a tax levied on the complementary health insurers. People's contributions to private insurance thus finance the public safety net. Furthermore, beginning in January 2016, all employers are legally obliged to negotiate a collective contract with a complementary insurer for all their employees.

Complementary insurance has become an important policy tool for raising new health care funding, with interesting consequences. First, it's no longer obvious what percentage of their income people contribute to health coverage. Second, management costs are high for the two-tired insurance system, which includes some 600 insurers of widely varying size.[5] Various scenarios are currently being explored for merging parts of the system or unifying the entire system — a politically sensitive topic.

The second key innovation was regional health agencies (RHAs), created in 2009 to adapt national policies and regulations to local circumstances, restructuring the delivery system as necessary. RHAs have overarching authority, including authority over private hospitals and the long-term care sector. They allocate the regional share of the national health budget to the various care providers (except independent doctors). Each health care institution must negotiate its funding, based on "projects," with the RHA, which provides the authorizations necessary to run health services. The agencies can thus enforce implementation of a coherent strategy — focused on cost efficiency, need satisfaction, and preparing for the future — among all care providers, including by closing or merging services or enforcing provider collaboration on, for example, creating care pathways, improving quality, or implementing e-medicine.

The RHAs are a tool for combining central regulation with decentralized contracting. They have extensive power and are accountable directly to the government. They work closely with public hospital directors, who often also serve in the Ministry of Health and represent a specialized professional body that is key to any effort to redesign French health care.

Perhaps French health care's biggest unsolved problem concerns the ambulatory care sector, where RHA tools have not been effective. As small hospitals have been closed down, the rural–metropolitan imbalance in the distribution of doctors has worsened. The RHAs are trying to encourage independent health professionals to establish multidisciplinary health centers in shortage areas, but progress re-

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mains slow. In fact, France faces a general medical demography problem: the average age of doctors is 51.4 years, and two thirds of medical students are now women. It seems unlikely that this new generation of mostly female doctors will choose to work as independent GPs in rural areas where social opportunities, especially in terms of employment for their partners, are rather limited. Current measures for enhancing the workforce include accepting more students into medical schools and investing in new technology and innovation to keep the best doctors in the public hospitals.

Responding to high public expectations remains challenging for regulators and policymakers. The lessons from the French health care experience are that accessible, high-quality care requires high levels of public expenditure, which require the support of the public and influential professions, and that the existence of nationwide complementary private health insurance allows not only for shifting expenditures toward private pockets, but also for raising "complementary" funds that can help finance free care for serious illness and for a public safety net.

Disclosure forms provided by the author are available with the full text of this article at NEJM.org.

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Tolerable Risks? Physicians and Youth Tackle Football

Kathleen E. Bachynski, M.P.H.

At least 11 U.S. high-school athletes died playing football during the fall 2015 season. Their deaths attracted widespread media attention and provided fodder for ongoing debates over the safety of youth tackle football. In October 2015, the American Academy of Pediatrics (AAP) issued its first policy statement directly addressing tackling in football. The organization's Council on Sports Medicine and Fitness conducted a review of the literature on tackling and football-related injuries and evaluated the potential effects of limiting or delaying tackling on injury risk. It found that concussions and catastrophic injuries are particularly associated with tackling and that eliminating tackling from football would probably reduce the incidence of concussions, severe injuries, catastrophic injuries, and overall injuries.[1]

But rather than recommend that tackling be eliminated in youth football, the AAP committee primarily proposed enhancing adult supervision of the sport. It recommended that officials enforce the rules of the game, that coaches teach young players proper tackling techniques, that physical therapists and other specialists help players strengthen their neck muscles to prevent concussions, and that games and practices be supervised by certified athletic trainers. There is no systematic evidence that tackling techniques believed to be safer, such as the "heads-up" approach promoted by USA Football (amateur football's national governing body), reduce the incidence of concussions in young athletes. Consequently, the AAP statement acknowledged the need for further study of these approaches. The policy statement also encouraged the expansion of nontackling leagues as another option for young players.

The AAP committee shied away from endorsing the elimination of tackling in youth football, because doing so would fundamentally change the way the game is played. Yet evidence indicates that tackle football in its current form is inconsistent with the AAP mission "to attain optimal physical, mental, and social health and well-being for all infants, children, adolescents and young adults." Repetitive brain trauma can have serious short- and long-term consequences, including cognitive and attention deficits, headaches,

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