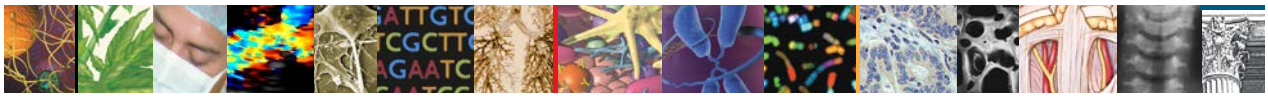

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Perspective

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INTERNATIONAL HEALTH CARE SYSTEMS

Perennial Health Care Reform — The Long Dutch Quest for Cost Control and Quality Improvement

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The Dutch health system has a strong penchant for reforms of all shapes and sizes, achieving varying degrees of success in a long struggle to contain costs and improve quality. Recent governments have invested in facilitating the introduction of more market-based mechanisms to reach these goals, while trying to uphold such social values as solidarity through care financing and accessibility. Throughout this process, the Dutch have never shied away from comprehensive, complex reform programs.

As many countries experiment with market mechanisms, the Dutch health system has received international attention. The Netherlands' 2006 reform established a private insurance market under regulated competition, similar to the new U.S. insurance exchanges. All Netherlands residents are mandated to purchase insurance policies, which cover an essential-benefits package. Insurers must accept all applicants and are expected to contract for care on the basis of quality and price. Residents pay a community-rated premium directly to their chosen insurer, and an income-dependent contribution is levied from employers' payrolls and pooled in a national fund. The fund's resources are allocated to insurers according to a risk-adjustment formula meant to eliminate incentives for avoiding high-cost enrollees. People with lower incomes receive tax subsidies, and supplemental private insurance is available.

The 2006 reform did not directly affect care delivery, only payment methods. The Netherlands, a small, densely populated country, has a tight network of general practitioners (GPs), hospitals, and independent treatment centers that operate as private, nonprofit institutions (see table). Municipalities are responsible for disease prevention, health promotion, and health protection. GPs act as strict gatekeepers; patients can see them without any cost-sharing payment. Residents register with a GP of their choice and consult the GP on average

Selected Characteristics of the Health Care System and Health Outcomes in the Netherlands.*	
Variable	**Value**
Health expenditures	
Per capita (U.S. $)	5,737
Percentage of GDP	12.4
Out-of-pocket (% of private health expenditures)	41.7
Public sources (% of total)	79.8
Health insurance	
Percentage of population covered in 2014	99.8
Sources of funding	Curative care: community-rated premiums (paid by residents), income-dependent employer contributions, tax revenue to cover children; long-term care: primarily income-dependent contributions
Average physician income in 2011 (U.S. $ [multiple of average Dutch wage])	
Salaried general practitioner	107,000 (1.9)
Self-employed general practitioner	173,000 (3.1)
Salaried specialist	170,000 (3.0)
Self-employed specialist	264,000 (4.7)
Generalist–specialist balance in 2011 (%)	
Generalists	44.6
Specialists	55.4
Access	
No. of hospital beds per 10,000 population in 2009	47
No. of physicians per 1000 population in 2010	2.9
Total government health expenditures spent on mental health care in 2011 (%)	10.6
Primary care physicians using electronic medical records (%)	98
Life and death	
Life expectancy at birth (yr)	81
Additional life expectancy at 60 yr (yr)	24
Annual no. of deaths per 1000 population	8
No. of infant deaths per 1000 live births in 2013	3
No. of deaths of children <5 yr of age per 1000 live births in 2013	4
No. of maternal deaths per 100,000 live births in 2013	6
Average no. of births per woman	1.7
Preventive care	
Colorectal-cancer screening generally available at primary care level	Yes
Children 12–23 mo of age receiving measles immunization in 2013 (%)	96
Prevalence of chronic diseases (%)	
Diabetes in persons 20–79 yr of age in 2013	5.2
HIV infection in 2011	0.2
Prevalence of risk factors (%)	
Obesity in adults ≥18 yr of age in 2014	19.8
Smoking in 2011	26

* Data are from the World Bank, the Organization for Economic Cooperation and Development, the Netherlands Ministry of Health, Welfare, and Sport, the World Health Organization, the Commonwealth Fund, and AVERT and are for 2012 except as noted. GDP denotes gross domestic product, and HIV human immunodeficiency virus.

MYOCARDIAL INFARCTION

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

When Mr. Van Dijk feels a squeezing pain in his chest and discomfort in both arms, his partner calls 112 (the emergency telephone number). Within 2 minutes of receiving the call, the emergency operator evaluates the urgency of the situation and dispatches an ambulance. After another 10 minutes, well within the self-imposed maximum total response time of 15 minutes, an ambulance staffed with an ambulance nurse and driver, who assists the nurse, show up at Mr. Van Dijk's house.

Dutch patients are treated according to the European Society of Cardiology guidelines. In Mr. Van Dijk's home, the nurse provides a diagnosis and uses Lifenet, a cloud-based platform for exchanging medical information, to mail an electrocardiogram (ECG) to the cardiologist, the assistant cardiologist, and the emergency department of the closest center providing percutaneous coronary intervention (PCI). After it is determined that Mr. Van Dijk requires a PCI, he is transported directly to the center while being treated with anticoagulants (heparin, clopidogrel, or acetylsalicylic acid). Access to PCI centers, which are located in hospitals, is excellent: there are about 30 PCI centers in the Netherlands, a country approximately 1.5 times the size of Massachusetts.

When the patient arrives at the PCI center, the procedure is performed and a stent is placed. After treatment, Mr. Van Dijk is moved to the ward. Since his condition is stable, he may return home after 1 or 2 nights of observation. Patients are seen at the outpatient clinic within 2 weeks after discharge and receive rehab in accordance with the Cardiac Rehabilitation Decision Support System (CARDSS) — including information sessions, physiotherapy, and if necessary, mental support. Since Mr. Van Dijk has only basic insurance and no additional insurance, he has to pay the full yearly compulsory deductible of €375 ($415).

Vanessa van Empel, M.D., Ph.D., of Academic Hospital Maastricht, contributed to this case study.

five times per year. Most GPs work independently or in a partnership, are paid through capitation and fee for service, and may employ nurses and primary care psychologists. Dutch GPs are reluctant prescribers and referrers: only 9 to 26% of consults result in referrals.[1] Most primary care fees are set centrally, but in the future some will have to be negotiated between insurers and GPs. Better care integration has become a key policy goal, and negotiated bundled payments for several chronic diseases should facilitate integration and improve quality.

Hospital and specialist care (except emergency care) are accessible only through GP referral. With a referral, patients may choose their hospital, paying a maximum compulsory deductible of €375 ($415) per year. Moreover, some insurance policies may require hefty cost sharing (around 25%) for visits with noncontracted providers. Since the early 2000s, regulations have fostered strong growth of independent treatment centers, which specialize in high-volume elective treatments in orthopedics, ophthalmology, or dermatology, for example. Yet insurers have become more reluctant to contract with them, fearing investing in overcapacity and supply-induced demand.

Virtually all specialists are hospital-based and work in partnerships or, increasingly, on salary (25% of specialists, most of them in academic hospitals). Hospital services are paid for through a diagnosis-related-group (DRG)–type system. But payment for certain DRGs, accounting for 70% of hospital care, is negotiable with insurers, and quality is expected to be considered. The remaining rates are set centrally. Specialist fees are integrated into DRGs but are now freely negotiable as well.

Recently, the government sought to encourage selective contracting by allowing "budget" insurance policies that restrict enrollees' choices to contracted providers. The bill was defeated, however, after criticism that it undermined solidarity and gave insurers too much power to decide what care is good enough. A new draft bill proposes giving patients who visit contracted providers rebates on their compulsory deductible.

The Dutch experience shows that implementing regulated competition takes time, is technically and politically complex, and requires many ad hoc corrections — and that good outcomes are far from certain. More practically, it underlines the importance

PREGNANCY AND CHILDBIRTH

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

When Ms. Jansen finds out she is pregnant, she contacts a primary care midwife practice in her neighborhood and schedules an appointment. Over the course of her pregnancy, the midwife monitors her health and that of her baby and gives advice on lifestyle. The frequency of checkups increases from once every 4 weeks to once every week at the end of the pregnancy. The care provided includes ultrasound exams around 10 to 12 weeks of gestation, around 20 weeks, and in the third trimester. Ms. Jansen and her partner also attend training and information seminars organized by the midwife practice.

The midwife provides prenatal care to women without medical complications, such as a twin pregnancy, hypertension, or malpresentations. In the case of obstetrical or medical problems, the midwife can refer women to a hospital-based gynecologist. Since no complications occur in Ms. Jansen's pregnancy, the midwife will guide the delivery, which could take place at home or in the hospital. Ms. Jansen decides to have her baby at home, as do 20% of Dutch women — the highest percentage among high-income countries. Had she chosen a hospital delivery, she would have had to pay €336 ($372), unless she has additional insurance covering hospital births.

Ms. Jansen gives birth without an epidural, which is very common in the Netherlands, even for hospital deliveries. If she had needed pain relief or if medical problems had occurred, she would have been transported by an ambulance to the hospital for a delivery under the supervision of a gynecologist. A maternity nurse assists the midwife and cleans up after the delivery. This nurse also comes the first week to help with the baby, perform the required checkups, and provide housekeeping. The duration of this maternity care is 49 hours with a copayment of €200 ($221).

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of risk adjustment, strict mandate enforcement, effective mechanisms for managing subsidies, and purchasing reform. Almost 10 years in, the reforms have not led to the desired cost containment or a leap in quality. Consumer organizations have welcomed increased choice, but individuals increasingly worry about cost-related access problems.[2]

Although some improvements are visible, insurers generally still lack the incentives, tools, expertise, and meaningful quality data to have a direct effect on quality. A long-neglected question was who should develop, collect, and supply such data. Finally, in 2012, the government set up a Quality Institute that imposed a mandatory framework for the development of care standards, clinical guidelines, and performance measures. Yet results will not materialize on a large scale for years.

The system remains costly as compared with those of other countries in the Organization for Economic Cooperation and Development (OECD), although cost growth has slowed recently owing to the economic crisis, the introduction of hospital budgets, and selective pharmaceutical purchasing. Quality of care ranges from about average to very good on some indicators (e.g., low volume of antibiotic prescriptions in primary care).[3,4] It remains to be seen whether future governments will continue encouraging competition or opt for more direct government control, as past governments have regularly done, often owing to political compromise.

As many countries grapple with aging populations, the planned reform of the Dutch long-term care program will probably draw more attention. Since 1968, the Netherlands has hosted one of the most generous long-term care programs among OECD countries. The scheme is enormous, about two thirds the size (in revenue) of the curative care scheme, with almost 1 in 20 people receiving such care. It is a single-payer program administered by 32 "care offices" that act as regional purchasers of residential and home care, mainly for elderly persons (about 75% are over 65 years of age), patients with psychiatric disorders, and persons with learning, sensory, or other disabilities. Long-term care recipients could until recently choose between benefits in kind or, since 1997, a personal care budget (chosen by 20% in 2010). The cost of this scheme has been steadily rising,

with the majority funded from contributions (12.65% of payroll, with a maximum of about €4,220 [$4,628] per person in 2014).

With macro-level cost control largely lacking in the curative care system, the long-term care program's sustainability has come under increased scrutiny. As a first step, eligibility for the personal budget was drastically restricted after large increases in participation led to 23% annual spending increases. The budgets were seen as a way of empowering patients, enabling continuous care by family members, and stimulating a market for care that would better meet patients' needs.[5] As of 2015, however, only patients who would otherwise have to move to a nursing or residential home may have personal budgets. And because of reports of budget fraud, they may no longer manage their budget independently: budgets are now managed by a government body (which has led to problems with late payments).

More radically, this year the Netherlands will embark on yet another massive reform, which directly affects the way patients receive their long-term care and aims to keep people self-supporting as long as possible. Such a change is long overdue, since the Netherlands has one of the OECD's highest institutionalization rates. Most forms of home support and social care will become the responsibility of municipalities, which will have great latitude in organizing support and may, for example, choose to substitute other solutions for professional care, such as care provided by neighbors or volunteers. Responsibility and funding for home nursing will shift to insurers, who will then be purchasing and organizing the whole range of medical care. Ideally, this change will facilitate better coordination and integration of care. District nurses will be instrumental to keeping people in their homes, visiting home nursing recipients and assessing their capacity for self-reliance. The expectation is that given their proximity to recipients, municipalities and district nurses will be better able to assess care demand and organize it more efficiently; the available budgets have therefore been reduced. Residential long-term care will remain available under a slimmed-down long-term care program with a lower contribution rate (9.65% of payroll, with a maximum of €3,241 [$3,556] per person in 2015). But in the future, responsibility may also be transferred to insurers, and the separate single-payer program for long-term care may be abolished.

An interactive graphic is available at NEJM.org

As with the 2006 reform, many aspects of the long-term care reform represent a leap in the dark, and outcomes are far from certain. Media reports of recent upheaval indicate that Dutch residents expect their government to sustain high levels of long-term care provision. But many questions remain unanswered. Will there be enough funding, and thus personnel, available for home support and residential and home nursing care? Are municipalities ready to take on their new roles? Will these changes increase disparities in delivery among municipalities? Current reports reveal problems on all these levels. Hence, the Netherlands' ability to solve problems on an ad hoc basis will be put to the test again. A perhaps-painful discussion regarding the boundaries of the welfare state seems inevitable.

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

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