

Dutch Doctors and Their Patients — Effects of Health Care Reform in the Netherlands

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It is still too early to draw definitive conclusions about the effects of the reform of the Dutch health care system, which was implemented in 2006. But physicians and patients are now living under the new system, and some of its consequences are becoming clear.

Primary care has been at the center of Dutch health care practice for a long time. All citizens are registered with a general practitioner, who provides generalist and continuous medical care and deals with more than 95% of health problems. Specialist consultations are covered by insurance only after referral. Since World War II, insurance coverage of the Dutch population has been practically complete. Until 2006, two thirds of the population was insured by public health insurance funds managed by non-profit associations, with enrollees making an income-dependent contribution. People with incomes above a predefined threshold were privately insured and paid a full premium.

Although the Dutch system provided high-quality care at relatively low cost,¹ many believed that the insurance system offered too little choice, spread the financial burden unevenly, and did little to control increasing health care expenditures. To address these problems, a new statutory health insurance system was introduced in January 2006. Under this system, the public health insurers have been privatized or have merged with private health

insurers, and all citizens are required to purchase a basic package of essential health care services, along with “own-risk coverage” (essentially an annual deductible) of €150 each year. The premium for this package is set by insurers in competition with one another, but they must accept all applicants without selecting risks. People with low incomes receive a subsidy for the basic insurance, and there is an option to purchase an additional package to cover nonvital extras. Long-term institutional and nursing home care is covered by mandatory special insurance, with an income-dependent premium.

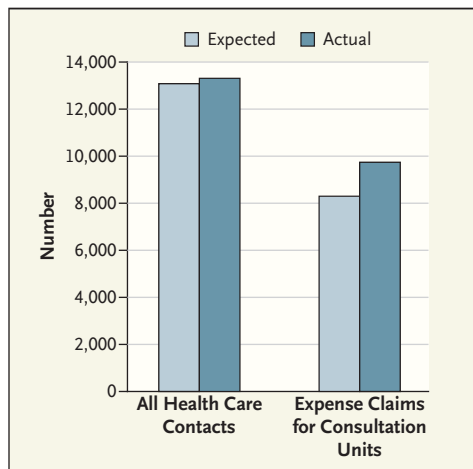
For general practitioners, who previously received a full capitation fee for patients registered with the public fund, a partial fee-for-service payment — €9 per consultation unit (with more intensive consultation services, such as home visits, counting for more units than less intensive ones, such as e-mail interactions) — was introduced, in addition to a still relatively substantial capitation payment for all registered patients (an annual registration fee of €52). There are extra allowances for caring for elderly patients and those living in low-income districts, as well as for taking part in health care innovation, such as programmatic care for patients with chronic illnesses.

The plan aims to make citizens aware of health care costs — and thereby encourage them to demand value for their money — and to introduce a greater

market orientation. As a result, the relationships among health care providers, insurers, and patients (or consumers) have changed. Providers, who had essentially been guaranteed contracts with health insurers under the old system, now must negotiate more extensively over price and quality of care. Accordingly, there is increasing competition among both insurers and providers, which is meant to enable consumers to make better choices. In principle, a patient’s insurer could refuse to contract with that patient’s physician, but since patients generally want to choose their own physicians, insurers try to avoid excluding physicians from their networks, instead seeking high-quality care from all physicians.

A new method for setting average prices for services on the basis of Diagnostic-Treatment Combinations — diagnosis-related sets of interventions, whose prices may vary somewhat among hospitals — should facilitate the competition, once excessive complexities have been eliminated. In 2008, hospitals will have the latitude to negotiate on the basis of price and quality for 20% of services. Given these limits, and the fact that insurers must accept all applicants for a standardized basic insurance package, the system represents a regulated rather than a fully open market.

Consumers now have greater responsibility for selecting health insurers that offer optimal care for the lowest price, which is theoretically good for both health



Expected and Actual Numbers of Health Care Contacts and Consultation-Expense Claims in 2006 for a Standard General Practice in the Netherlands with 2350 Registered Participants.

and cost containment. In 2006, the first year under the new system, many more people chose a new insurer than had done so in 2005 (18% overall vs. 3% of those who had had public insurance in 2005 and 8% of those who had had private insurance). The proportion was much lower in 2007 (6%), but when premiums begin to vary substantially, more consumers may switch again. There had been some fear that the percentage of Dutch people who were uninsured would increase, but in fact, at 1.5%, it is somewhat lower than before.

Consumers seem to have embraced their more active role in health care. Consumer organizations are participating in negotiations with providers, insurers, and policymakers and are represented on task forces that prepare professional guidelines and performance indicators. They generally approve of eliminating the difference between public and private insurance, but they are watching carefully to see whether the compulsory own-risk coverage will put people with chronic

illnesses at a financial disadvantage. It has already been determined that patients with chronic conditions who need medications on a long-term basis will receive extra compensation.

Health care providers, for their part, are more challenged by the new system. In their negotiations with insurers, they must now document the quality of care they provide, with reference to evidence-based guidelines and performance indicators. General practitioners who seek additional financial compensation must also demonstrate their engagement in quality-improvement initiatives. Since it is difficult for individual practitioners to negotiate with insurers, regional collaboratives often represent them. The negotiations have already had beneficial effects, including improved health care programs for chronic illnesses such as diabetes and better financing of practices' support staff. In 2006, general practitioners submitted 17% more claims for consultation expenses than had been anticipated, although the total number of health care contacts increased by only 1.7% (see graph).² This increase suggests that the new system is a boon to general practitioners in low-income districts, since the old system's capitation payments fell far short of appropriate compensation for their work. Moreover, the increase did not affect the annual growth of total national health care expenditures, which, at 4.4% in 2006, was similar to that in 2005.

Hospitals now have a greater motivation to compete by offering high-profile services, such as neurosurgery or radiation therapy. Academic hospitals, however, have expressed concern that this

trend may push smaller hospitals to provide complex interventions at too low a volume to ensure the efficacy and safety of the care — a new phase in an ongoing debate over the best way to balance competition with quality assurance.

As for the quality of care, it is generally agreed that the basic coverage, the contents of which are determined by the minister of health, is an important safeguard against inconsistency and inequity in essential care for similar health problems. Regarding the criteria for delineating the basic package, experts have recommended an evidence-based approach that considers the burden of illness, the effectiveness of interventions, and cost-effectiveness, guided by the advice of an independent national body of experts and consumers.^{3,4} This process can be supported by the evidence-based standards of the Dutch College of General Practitioners and clinical guidelines from the Dutch Institute for Healthcare Improvement — both of which also provide a foundation for the performance indicators being developed by professional organizations, the Health Inspectorate, the Ministry of Health, and insurers. Although the importance of indicators is widely recognized, the related methodologic issues still require much attention.

As the reforms play out, we will have to monitor the quality of care, the cost, access to care and insurance coverage, and national health and compare our results with those of other countries — not an easy task, since changes also reflect broader sociocultural developments. The system should certainly be evaluat-

ed in relation to another major national concern: the life expectancy of the Dutch population is increasing more slowly than the European average. Although this trend is not fully understood, health-related behavior seems to play a role. Accordingly, Dutch Health Minister Ab Klink has prioritized health promotion and the integration of preventive care into the health insurance package. Much is expected from better collaboration between public health workers and general practitioners, who have specific responsibility for their registered populations.

In the Netherlands, patients and doctors generally seem willing to accept the regulated market orientation, provided that competition leads to better health care for all. It is also increasingly recognized that optimal care and prevention, apart from improving health, are important for the market itself, since they stimulate employment, societal participation, and economic development.⁵

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Knock Out, Knock In, Knock Down — Genetically Manipulated Mice and the Nobel Prize

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In Stockholm this fall, the Nobel Prize in Medicine or Physiology was awarded to Martin Evans, Oliver Smithies, and Mario Capecchi for their discoveries of “principles for introducing specific gene modifications in mice by the use of embryonic stem cells.” The methods they developed make possible exquisitely detailed studies of the function of almost any gene in a living animal. Given the high degree of similarity between the mouse and human genomes, this technology of gene manipulation has important clinical implications.

The concept of genetically engineering a mouse is straightforward: devise a specific genetic modification in a chromosome of embryonic stem cells and use these modified cells to generate mice that can transmit the new

trait to their offspring. The method’s simplicity rests on two principles: the ability to exchange specific chromosomal DNA sequences in mammalian cells by means of homologous recombination and the manipulation of embryonic stem cells in a way that allows inheritance of the genetic modification.

During sexual reproduction, meiosis halves the chromosomal content of a diploid germ cell, yielding a haploid gamete. The gamete fuses with another haploid gamete to become a diploid zygote, which has a new pair of chromosomes — one from the egg, one from the sperm. As it develops, the zygote recombines chromosomes at sites of homologous genes derived from the two parents (homologous recombination), creating a unique combina-

tion of genes (and ensuring genetic variation within a population). Homologous recombination also occurs in somatic cells during the repair of a damaged DNA strand, with the intact copy on the partner chromosome serving as a template.

In the 1960s, Oliver Smithies found experimental evidence that homologous recombination generated allelic variation in human haptoglobin genes, a large family containing multiple copies of functional and inoperative genes. In 1985, Smithies and colleagues introduced a short DNA sequence from the human beta-globin locus into an erythroleukemia cell line and were able to detect a specific exchange of the beta-globin gene with the homologous sequence in about 1 in every 1000 cells.¹ Since this frequency was much