Future Challenges to Health Care Systems

14.1 Introduction

Actors on markets are under continuous pressure to adjust. Consumers’ changes in taste lead to changes in demand, new technologies provide rivals with competitive advantage, and public authorities step in to regulate or even prohibit business. This pressure to adjust is transmitted by price signals indicating to firms the need to adapt their goods and services to new circumstances. In health care, however, fluctuating market prices for medical services are incompatible with the key principal-agent relationship between the patient and the service provider because they might violate both the participation and the incentive compatibility constraints (see Chapter 11, Appendix). One possibility of avoiding fluctuating prices is bargaining over fee schedules, which paves the way for the important role of professional associations and public authorities in health care. The inflexibility of fees and prices is further enhanced by the fact that purchases of health care goods and services such as pharmaceuticals abroad are often legally prohibited. This serves to insulate domestic markets from international shocks but also competition.

This departure from allocation through prices, however, has the adverse effect of reducing the system’s speed of adjustment. For example, structural adjustment of a fee schedule usually takes years. On the one hand, this sluggishness prevents physicians, dentists, and hospitals from initiating and swiftly concluding contractual agreements with insurers because of temporary advantages, which would be to the detriment of many patients. On the other hand, it causes considerable delays in adjustment to exogenous shocks. The ensuing disequilibria are perceived as ‘challenges to health care systems’. At the beginning of this century, such challenges have emerged in four areas.
(1) *The technological challenge*. The following citation gives a first impression of the speed of technological progress in medicine:

“In 1980 alone the magazine Newsweek presented the following medical innovations: a new piece of equipment of a significance comparable to the CT scanner which makes brain-waves visible, revolutionary surgical methods for eliminating shortsightedness and infertility in women, new drugs for jaundice, sexually transmitted diseases and gout, various new cancer treatments, an operation for safe implantation of artificial breast following breast removal in females, new life-saving techniques in child heart surgery, and a new type of electric shock treatment to regenerate muscle and nerve tissue. Through this, one day even paraplegics will be able to walk.”

[Krämer (1982, p. 37)].

Almost all of these innovations are product innovations, i.e., they save lives or contribute to an improved quality of life, although at (much) higher cost: “When Christian Barnard transplanted the first human heart on 3rd December 1967, at that very moment the cost of such a treatment rose from zero to US$110,000” [Krämer (1982, p. 92)]. Conversely, process innovations which enable a particular service to be produced at lower cost are rare. There seem to be even fewer organizational innovations in health care, which promise cost savings through a rebundling of production processes resulting in economies of scope. Thus, technological change in medicine threatens to become the driving force of future ‘cost explosions’.

(2) *The demographic challenge*. At first sight, this is simply to say that more and more people are getting older. In 1996, the share of aged individuals as percent of total population in the United States was 12 percent and is predicted to increase to 25 percent by the year 2050, a figure that will be even exceeded by Japan with a share of 30 percent [see Fougère and Mérette (1999)]. Old age is associated with an increased demand for medical and in particular nursing services, and the issue is how to meet this demand. On closer inspection, however, it is more the proximity to death than calendar age that seems to matter [Zweifel et al. (1999b), Zweifel et al. (2004b), Werblind et al. (2005)]. This would mean that the last, expensive year of life would simply occur at age 85 (say) instead of age 75 as at present. It is another demographic change that may turn out to be a more important driver of health care expenditure (HCE). Within just twenty years, the number of single person units has greatly increased, e.g., from 13 to 25 percent in the United States [see Roussel (1986) and U.S. Census Bureau (2004)]. Persons living alone are much less able, in the case of illness, to fall back on support and care from relatives, causing them to demand more health care services.

(3) *The challenge of the ‘Sisyphus Syndrome’*. The success of modern medicine reminds one of Sisyphus, the hero of Greek mythology who was condemned to roll a lump of rock up a mountain only to see it slip out of his grasp just before reach-