

Governing Health Care with IT

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INTRODUCTION

The pressures for the health care industry are well known and very similar in all developed countries: altering populations, shortage of resources as it comes to staff and financial resources from the taxpayers, higher sensitivity of the population for health issues, new and emerging diseases, just to name a few. Underdeveloped countries have different problems, but they also have the advantage of being able to learn from the lessons and actions the developed countries made already, maybe decades ago. On the other hand, many solutions also exist, but they all make the environment even more difficult to manage: possibilities of networking, booming medical and health-related research and knowledge produced by it, alternative care-taking solutions, new and expensive treats and medicines, and promises of the biotechnology.

From the public authorities point of view, the solution might be easy: outsource as much as you can out of this mess. Usually, the first ones to go are marginal operational activities, such as laundry, cleaning, and catering services. It is easy to add information systems to this list, but we believe this is often done without a careful enough consideration. Outsourcing is often seen as a trendy, obvious, and easy solution, which has been supported by financial facts on the short run. Many examples show that even in the case of operational information systems outsourcing can become a costly option, not to speak of lost possibilities for organizational learning and competitive positioning through mastering of information technology.

In this article, we discuss how information technology and health care industry work together. Information technology is a valuable resource that must be managed within the health care industry. At the same time, information technology has the potential to renew the whole industry. Good practices in both must be supported by good IT governance.

Health care is a big resource user in every country. In Table 1 we have percentages of health care expenditures in relation to gross domestic product in selected countries, where the percentage is very high (WHO, 2004). As one can see, the cost explosion phenomenon hits both rich and poor countries, even though the wealthiest countries are well presented in the list.

Table 1. Top 20 percentages of health care expenditure in relation to gross domestic product in 2001 in selected countries (WHO, 2004)

USA	13.9
Lebanon	12.2
Cambodia	11.8
Switzerland	11.0
Uruguay	10.9
Germany	10.8
Timor-Leste	9.8
Marshall Islands	9.8
France	9.6
Jordan	9.5
Argentina	9.5
Canada	9.5
Greece	9.4
Suriname	9.4
Australia	9.2
Palau	9.2
Portugal	9.2
Iceland	9.2
Croatia	9.0
Belgium	8.9

Health care costs can be born by different parties within a national economy. Shares of different potential cost carriers vary from national economy to economy:

- The national government, directly or through different indirect arrangements such as separate funds or public insurance institutions
- Municipalities or other local public actors
- Private insurance institutions
- Employers
- The patients themselves

For example, in the United States, the raising costs of health care born by the employers have been a topic of much academic and industry discussion (Berry, Mirabito, & Berwick, 2004). Sadly enough, there is controversial evidence whether information technology can lower the total costs of running health services (Ammenwerth, Gräber, Herrmann, Bürkle, & König, 2003; Ko & Osei-Bryson, 2004).

There are few other forces than modern information technology that could cut down costs in the health care

industry. In addition to cost cutting, information technology can provide extended productivity and is an ingredient in the processes that cumulate towards better care practices. But advantages from information technology are not to be harvested without constant focus on IT governance issues in the industry.

BACKGROUND

We have found the following reasons for the late adoption of modern information technology in the health care sector (Suomi, 2000):

- Fragmented industry structure
- Weak customers
- Strong professional culture of medical care personnel
- Hierarchical organization structures
- Handcrafting traditions
- One-sided education
- Big national differences in processes

We will next discuss each of these issues in greater detail.

Fragmented Industry Structure

Good competitors and customers are a key to success for any company and industry (Porter, 1990). Unfortunately, the health care sector has not been able to enjoy from neither of them. For a long time health care has been considered as a faceless public service, where normal competitive forces are not in effect. Health care organizations have not felt each other as competitors, and neither have they documented productive cooperative behavior. First with penetrating privatization the situation is starting to change.

Weak Customers

As it comes to customers, most often they get into touch with the industry when in a critical and sensitive situation, where bargaining power is very low. Bad service has just to be suffered. First during the last few years the concept “customer” has started to substitute the word “patient.” Regulative bodies have become active in this respect, and for example in Finland a special patient-ombudsman has been institutionalized and legislation on patient reclamation and insurance has been introduced. In general, new technology is seen as a method to empower patients (Beun, 2003).

Strong Professional Culture of Medical Care Personnel

Professional cultures can have a profound outcome on organizational outcome. Within the health care sector, there are many strong professional cultures, the strongest of them being those of doctors and those of the nurses. People seeking to these professions usually value human interaction, and are not much up for abstract systems such as computers.

Hierarchical Organization Structures

A part of hospital organization has always been a strong hierarchical, professional and specialized structure. Work on the computers, unfortunately, is low on the hierarchy list, especially of course in the activities of keying in patient data that would be a natural thing to do for the doctors. As EITO (1995, p. 46) put it: “*for many Health Care applications, the most difficult obstacles can be social and cultural.*” It is well known that information system development and application can be very difficult or at least different from less bureaucratic organizations than the health care.

Handcrafting Traditions

Even when we conclude that health care is a very information intensive industry, it has not been considered as such one. A good doctor is valued because of his handcrafting skills, especially in surgery, and it is not being understood that behind the handcraft operations a vast amount of knowledge is needed. Some, anyway, have understood that human body is the most complex entity in the world and of which information and knowledge has been collected over thousands of years.

One-Sided Education

Education of health care personnel has traditionally not focused on computer skills. Even the classical university tradition has kept medical and natural science (and thus computer) faculties apart from each other. Fortunately, during the last years, the drive for deeper cooperation between different science fields has begun to bear fruit.

Big National Differences in Processes

Patient care is very culturally bound, and especially the administrative processes behind vary greatly from one country to another. This, of course, makes standardiza-

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