Chapter 2.8
Shared Healthcare in a Regional E-Health Network

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ABSTRACT

Healthcare information exchange is transforming the practice and structure of healthcare delivery. This chapter introduces the building of a regional e-health network between public healthcare providers as well as the necessary legal foundation and governance for this successful deployment in a Finnish Hospital District. An overview is presented of prerequisite building blocks, such as policies supporting the knowledge-intensive e-health services and the creation of a partnership between shareholders enabling regional e-health delivery. The roadmap to a national e-health network is paved on the premises of these experiences and lessons learned are transferred to described concepts when migrating to a national e-health network. Understanding these principles and critical success factors (i.e., the role of stakeholders, governance, and financing) is essential for guidance to implement viable cross-organizational information exchange. In this context ICT not only fulfills the objective of cost containment, but also creates positive impacts on patient care and service quality.

BACKGROUND

Knowledge is fueling growth and social development in every region of the world. Finland has successfully evolved from a resource driven economy to a knowledge driven economy spearheaded by information and communication companies such as Nokia. However, it is the use of ICT rather than its production that is decisive in the long-term economic growth.

The transformation may be explained by global financial and economic restructuring, but also by less typical national policies including a strong welfare state and in particular the very strong emphasis on education (Dahlman, 2005). The welfare state is not a unitary concept, but rather a mixture of values, accomplishments and aspirations varying somewhat from country to country (Giddens, 2007). The traditional welfare state is essentially a collective insurance system, which has been slow in adapting to changes initiated by the knowledge driven economy and specifically the use of information technology.

Health policies in most countries have been more or less oriented to here-and-now problems as they

occur and health care provider interests tend to prevail over those of clients. Present day healthcare is provided by information-based organizations requiring clear, simple common objectives that translate into actions, so as to optimize the joint performance.

The productivity of the public sector, organized and performing in this fashion, has been declining in the 21st century (Mäkitalo & Ruottinen, 2006), although productivity is the key to meet the increasing financial requirements of the welfare society that stem from the consequences of the demographic changes in Europe.

In the post-industrial welfare society we should be expecting empowered clients through a series of mechanisms, such as availability of information, personalization of services and choice (Giddens, 2007). The average person's ability to access data and communicate electronically is proliferating exponentially. In Finland, 80% of the population is using the Internet and every second citizen owns a PC. Although more than 100 personal health records (PHR) and related technologies have proliferated in the United States and abroad, only a small proportion of the population uses PHRs (Connecting for Health, 2006). Therefore, this leapfrog change to consumer directed healthcare is expected to take some more time and in the meantime we need to adopt provider-sponsored clinical data networks in healthcare.

TRANSFORMATION OF HEALTHCARE WITH ICT

It is widely acknowledged that one of the greatest challenges facing healthcare information technology today is the effective sharing of clinical and administrative information among healthcare providers. Although timely sharing of patient data has been slowed down by issues such as security, privacy and confidentiality, lack of standards has created obstacles to achieving interoperability between different information systems.

Information Sharing in Networks and Healthcare Practice

Knowledge-based organizations are composed mainly of specialists who develop their own performance through feedback from colleagues and also from clients. Hospital care in university clinics mirrors this kind of knowledge-intensive service model with highly educated specialists and coordinated practice. Members of these networks are separated from primary care physicians through organizational boundaries, but also to some degree by practice and identity that divide.

Looking at learning we see the analogy in two types of work-related networks that, with the boundaries they inevitably create, are critical for understanding learning, work, and the movement of knowledge (Brown & Duguid, 2002). First, there are the networks that link people to others whom they may never get to know but who work on similar practices. These are the "networks of practices" and they are notable for their reach which may be fortified by information technology. There is some reciprocity in consultations across such a network. Although these networks produce little new explicit knowledge, they are operationally very efficient in supplementing tacit and collective learning to this process.

These networks represent practices between hospital and primary care physicians or other professionals. Healthcare information sharing by ICT is most suited to support, develop and strengthen the networks of practice. However, healthcare has been slow in undertaking such exchanges because supporting reach and information sharing extracts resources and knowledge from hospital care and results in the reduction of demand for hospital services. Therefore, such loosely coupled networking systems may make the hospital vulnerable and therefore formal agreement and strategic alliance negotiations are necessary early on.

Second, there are the more tight-knit groups formed, again through practice, by people working together on the same or similar tasks. These

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