HealthManagement
Promoting Management and Leadership

Volume 3 / Issue 4 / 2008 - Country Focus: Central Europe

Healthcare IT Projects in Central Europe

Czech Republic

A National Action Plan eEurope+, dating back to 2002, includes an on-line Health (Zdravotnictvi) program. This is focused on enhanced usage of the Internet to improve quality and cost-effectiveness in the delivery of health care and covers telemedicine and medical documentation. Specific objectives include replacement of health insurance cards with EU-standards compatible smart cards, and a data network connecting domestic points of care to counterparts in other EU countries. The program also urges active participation activity by insurance companies to establish an electronic portal for reimbursement, and to motivate healthcare professionals to make more extensive use of IT.

National legislation in the Czech Republic addresses the following e-Health-related issues: data protection, telecommunications and authorised digital signatures. The latter enables legal validity of electronic documentation as well as provision of ePrescription services and medical professional registries.

The legislation enacted in the Czech Republic with impact on the EU-level harmonisation process includes coverage of the community directives on data protection, on a community framework for electronic signatures, on privacy and electronic communication, as well as on electronic commerce.

A national EHR system used by insures and health care institutions already operates nationwide and includes functions such as ePrescription, eMessages and eAlerts. Meanwhile, to support its objectives, the government is implementing EU-compliant rules and laws on data protection and confidentiality, as well as digital signatures.

In 2005, IZIP - the Czech nationwide electronic health record system - was awarded a United Nation's 'World Summit of the Information Society' award in Tunis, where it was judged by the experts as one of the top five projects in the world in e-Health. The same year, IZIP was selected as one of 12 EIPA (European Institute of Public Administration) best public eServices projects in the world.

The system insures about 2/3 of all Czech citizens. It has spread over the whole of the Czech Republic since the beginning of 2003. Discussions with healthcare authorities in other countries are underway to expand similar services to their jurisdictions.

The principal role of IZIP is to provide both the technical and the service infrastructure for the comprehensive record integrating medical data from individual health - care professionals and healthcare provider organisations (HPOs), and assuring full control by the insured citizen. They have the right to access and read their own EHR, but they cannot change them. They can authorise healthcare professionals to view and update their data, converting citizens to an active participant in the healthcare system. They are thus better placed to make responsible decisions about their health, cooperate better with healthcare providers and gain a picture of the technical, resource and financial possibilities and limitations of the proposed or available services and procedures.

This is a basic change compared to the conventional system of health record administration, where the HPO, not the citizen, had the power to disclose information. Lastly but not least, it took almost seven years to achieve an annual net benefit (eight years on a cumulative basis). The estimated net annual benefit in 2008 exceeds 60 million euros while the estimated productivity gain, measured as the decrease in the cost of using a record, was found to be 74%. Citizens, having control over the information on their health history and access to it, as well as avoiding unnecessary interventions, are estimated to receive about 10% of total gains.

Hungary

Hungary launched a Health Portal in 2003 to provide healthcare professionals with access to information on drugs, evidence based medicine and medical eBooks. It includes links to:

Ó The MSDC: the multifunctional smart card for doctors functions both as a professional medical ID card and a bank card, to be used by physicians in Hungary. The chip-based implementation of this smart card also allows the use of further functions, such as authentication, certification of medical education, digital signiture, etc.

Ó MD-PACS: the aim of the research and development was to develop a digital archival system for medical images based on widely accepted international standards.

Ó Dialysis card: Dialysis and transplantation Card System supports the follow-up of patients in need of dialysis, patients already dialysed, patients in need of transplantation and those having already undergone transplantation. The chipcard is to be seen as additional data storage and management tool on the one hand and as a communication tool on the other hand.

Ó Virtual information space for healthcare: the core of the virtual information space is a virtual patient data base through which health care pro viders in different institutions can have access to patient data.

Ó ProRec - Promotion of Electronic Healthcare Records: the core task of the Hungarian ProRec centre is to collect and make publicly available information about different IT products and developments in this area, as well as to raise the awareness of the de velopers of the individual domestic healthcare telematics applications so that these systems become interoperable both within Hungary and between the country and the EU.

Ó Voluntary health fund card: the MediSmart Card System operates a contract based system to manage the transactions between the funds and the service providers. To this end, MediSmart issues smart cards that support cash-free payment between the funds and the service providers.

Follow-on objectives and planned activities of the Hungarian eHealth Program include:

Ó Converting health care databases to digital format.

Ó Introducing digital documents in the health care system: eCase- History (of a patient), eConsultation, eTestresult, ePrescription.

Ó Setting up eHealth information databases for patients: eData, ePatient, eOperation.

Ó Preparation for the introduction of the digital signature in the health care system.

Ó Launching a web site for the disabled;

Ó Providing information on evidencebased therapies.

In the first half of 2004, the Ministry spent 300 million HUF on 29 projects in the field.

An interactive public site known as Dr. Info followed the next year – essentially focused on general healthcare information (as well as details on medicines and physicians). In 2005, a portal directed specifically at the needs of disabled patients added a further layer to the country's e-Health effort.

New legislation in October 2006 set the foundations for ongoing and future developments in Hungary's e-Health Program. The law foresees far-reaching (but phased) changes in drug prescription and dispensing, which will be enabled by the Health Portal.

In parallel, Hungary has set up a PKI (public key infrastructure) to provide a technological anchor for the e-Health Program. Its key elements include formalising of data models and communication standards for electronic prescriptions, consultations and results, patient records, and reimbursement. It also covers digital signatures and implementation of TTP (Trusted Third Party) health and social services as well as secure access to Electronic Certified Public Registries via the Portal.

By 2007, Hungarians had been issued over 350,000 European Health Insurance Cards (EHIC). Through the NETC@RDS consortium (of which it is a member), Hungary is also participating in the pan-European Initial Deployment phase (2007- 2009) of the EHIC.

Poland

Poland's Centre for Healthcare Information Systems is the flagship body responsible for the provision of e-Health solutions. The Centre is part of the Ministry of Health, and coordinates with other ministries and organisations involved with broader Information Society programs in the country.

Medical information for the public (with restricted sub-domains for healthcare professionals) is one of the lighter elements of the Polish e-Health program. This is available on Portals hosted by both drug companies as well as the Ministry of Health.

Formally, e-Health programs in Poland are based on an internal Health Ministry policy document in 2004 called 'Poland – eHealth Strategy for 2004 – 2006'. This reinvigorated earlier efforts in the area (principally in the form of pilot projects on health records and electronic registries – some funded by the World Bank).

The 2004-2006 strategy paper was, in turn, buttressed in March 2005 by a position paper on a 'Strategy of information infrastructure

development in health care and introduction of the European Health Insurance Card'. Key elements of both were formally adopted in December 2005 by the Polish government.

As elsewhere in the EU, enabling laws and regulations on e-Health in Poland are principally directed at issues of data protection, digital signatures and Health-IT product liability.

On the e-Health systems and infrastructure side, key initiatives underway in Poland at the moment include interoperability of IT solutions, the launch of a secure messaging system between healthcare facilities called ZOZMAIL, the establishment of secure central data bases and registries (covering health service providers, pharmacies, and other organisations), and last but not least, an acceleration in the availability of telemedicine services.

The specific tasks conducted in the context of e-Health area enlisted in "The Strategy of Development of Health in Poland for years 2007-2013" encompass: Development of the system of health information with the aim of the analysis of the level of health services demand.

Ó Promotion of the access to healthrelated and services provision information to citizens (repositories of health contents, national health portal).

Ó Development and implementation of the information system supporting management in hospitals and other health facilities.

Ó Development of information system on medication orders and consumption.

No dedicated healthcare network is available in Poland. Some health care institutions maintaining the cooperation in specific areas use VPN-based communication through available physical networks.

Recently, a broadband network based on fibre-optic connections was developed in Kujawsko-Pomorskie Voivodship; it also became the basis for a tele medicine network including several healthcare providers in this region.

Teleconsultation/second opinion services were implemented in some regions between providers representing

specialities such as oncology, cardiology, pulmonology, etc.

Furthermore, telemonitoring services based on the Internet were offered to patients with specific long-term conditions, e.g. arterial hypertension, bronchial asthma within pilot projects.

The plans for development of a e-Health network, however, seem to remain in the conceptual phase only. Results of the some studies focused on the delivery of e-Health care to patients with specific medical conditions are also available.

Poland has some of Europe's leading telemedicine centres. These include the Kajetany-based International Centre of Hearing Disorders, the Polish Network of Severe Asthma, the Institute of Cardiology at Anin, the Krakow Centre of Telemedicine and the Malopolska Centre of Advanced Technologies.

Slovenia

Slovenia's e-Health program is directly ins pired by convergence with trends and developments in the European Union, and described in a policy paper called 'Action plan for a European eHealth Area'. Targets include residents and healthcare professionals as well as managers and purchasers.

In December 2005, the government released a position paper called 'eHealth 2010 – Strategic plan for the Slovenian health sector informatisation', with three main lines of activity:

Ó To establish a strong IT infrastructure and database definition in order to achieve implementation of a national electronic health record.

Ó To inter-connect health information systems on a national level via a health portal, which would provide

secure data exchange between all concerned parties in the health system, and connect to other systems across Europe by the end of 2010.

Ó To establish eBusiness as a common means of work in the Slovenian health sector by the end of 2010.

One of the key and most expansive tasks in realising the Slovenian e-Health strategy by 2010 will be the renewal of the system. The renewed card with digital certificates and an on-line system also opens up possibilities for the healthcare sector's cooperation with other sectors in the country.

The new electronic identity card, which will also include the functionalities of the health insurance card, will be among the first such solutions. However, the system will be introduced gradually.

The introduction to a group of healthcare providers in the pilot area (Nova Gorica region) is planned for October 2008. Based on the experience gained, the system will be upgraded with necessary modifications, if any, whereupon in 2009 a national implementation from region to region will follow.

While introducing the new system, the authorities aim to gradually eliminate the self-service terminals network, as there will be no need for refreshing the data on the health insurance cards.

Several e-Health pilots have already become operational in Slovenia, especially those focused on other new EU members as well as neighboring countries like Italy. These include:

Ó PRIMACOM, to enhance exchanges of primary and secondary healthcare data with Hungary, which has developed a prototype middleware-based application for the transfer of distributed software technologies across Eastern Europe. PRIMACOM have used European standards, developed by CEN TC 251, for exchange of medical data and experience by implementing Regional Health Care Networks from Denmark and Italy.

Ó NETC@RDS, designed to improve mobile access to pan-European health services, and based on advanced Weboriented applications. It also aims to implement and evaluate technical solutions for the European Health Insurance Card and for improving additional services such as the inter- European health costs clearing/ billing processing.

Some of the future activities in the e-Health field include the creation of a National Health Information Portal by 2010, providing interlinking of all stakeholders, security infrastructure as well as tools for communication between the citizen and the healthcare system.

Conclusion

In each country, e-Health investments focus on addressing well-defined needs, either of citizens, or related to the process of health and healthcare provision.

This can take the form of solutions to problems, as well as process optimisation addressing the need for more timely, more accurate, or easily available information about health and lifestyle, or any other health related service.

Published on : Thu, 3 Apr 2008