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Is There a Common Background to Support Better Healthcare in Central and South East Europe?

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Abstract. The workshop is proposed by the EFMI WG Health Informatics for Interregional Cooperation with the support of the Electronic Healthcare Records WG as a platform for finding common interests regarding improvement of healthcare services for the Central and East European geographical area. The goal is to assess conformance to international standards in healthcare and to find domains in which each country can provide best practices results of using ICT in support of healthcare.

Keywords. healthcare services, cross-border cooperation, standards, mobility

1. Introduction

Applications connected with e-Health are solving important issues for the future of European healthcare: increased mobility of citizens in Europe with the move towards equity in healthcare, the arising problems of an ageing society, and in general, reducing costs of healthcare services. That is why the e-Health action plan was developed and gives a timeline for addressing common challenges. Lately the concern was oriented on boosting investments in e-Health (for 2007), deployment of health information networks (2004–2008), including broadband, wireless as well as grids, and will continue with certification of qualifications (2009) [1]. Connecting people, systems, and services would be vital for the provision of good healthcare in Europe. The lack of interoperability in systems and services has long been identified as one of the major challenges to the wider implementation of the Union's e-Health applications. On 16 Julyprofessionals supporting reform and organization through Integrated Regional Health Information Network, Electronic Health Records, e-Prescription, and e-Referral. In this context the Central and South Eastern European area can set an example benefiting from common cultural and historical experiences. Also, the life habits that reflect in the health status of the citizens in the area can be a common ground for starting a better, increased and mainly coherent cooperation in the region. For now we will take into consideration the following (alphabetically): Austria, Bosnia-Herzegovina, Croatia, Germany, Hungary, Romania, Serbia, and Slovenia. We will review the e-health application status, focused on EHR systems, interoperability, and search for healthcare patterns, domains of expertise and causes of mobility of patients and how the information and communication technology (ICT) support can reduce costs with benefits for all the healthcare systems of the area [2].

Invited speakers will present the following issues: EHR developments in the country, interoperability status/readiness, and education in healthcare informatics preparing specialists, mobility (work, holydays, relatives, etc.), government attitude and support towards eHealth if the case, private companies' involvement in the domain, and conclusion regarding the need for cooperation based on the aforementioned issues.

2. Status for the Focused Regional Group

A review of the EHR status for the previously mentioned countries will follow in order to identify viable local solutions that can be imported by other entities in order to reduce the costs of developing the same tools all over again [3, 4].

Austria: The Electronic Health Record (EHR)/*Elektronische Gesundheitsakte* (ELGA) aims to integrate the various but isolated systems of information technology (IT) based health data management that exists in Austria. It will help promote the implementation of integrated care, in particular, by enabling better cooperation between the secondary/acute care sectors and the primary/community care. Core applications of the first implementation phase consist of the electronic discharge summary, e-Report laboratory, e-Report radiology and an e-Medication tool. The challenge for legislators will be to establish a balance between the right to privacy and the right to patient information. Long established legal acts already oblige doctors and hospitals to file patient documentation. More recently, the Health Telematics Act has provided rules on the electronic exchange of health data and respective information management.

Bosnia and Herzegovina: Since five years, governmental and the nongovernmental organizations have been developing the projects of the globalization of the electronic healthcare support (Global eHealth) and providing large scale use of Internet for accessing medical knowledge in Bosnia and Herzegovina. Local experts and foreign companies are actively involved in the creation of ICT solutions supporting the healthcare system and the medical educational system.

Croatia: The basic concept of the Croatian health information system established in 2003 includes integration of all the health care participants: primary health care (physicians and nurses in GP offices, pediatricians, gynecologists, dentists etc.), hospitals and polyclinics (all the health workers), public health institutions, biochemical and other laboratories, pharmacies and health insurance companies. Before the 2003 nearly 60% of GP offices have had some kind of electronic health record installed on personal computer, accessible to physician. In 2008 the PHC information system has been established as the system with centralized repository of health-careuser

health data accessible from GP office by both physician and nurse, according to their right to access. Electronic health record (EHR) and communication developed for use in PHC has

been developed by taking into account EN 13606 and HL7 standards. So far, hospitals are not yet 2007 the European Commission issued a set of draft recommendations on e-Health included in realization of this general integrated concept, but most of them continue to develop their own information systems with more medical data included in them. Recently some of hospitals started to develop communication with PHC in order to implement a system of ordering the patients for diagnostics. The system is web-based and it enables the GP to find free capacities in hospital (location and time) and to put the name of the patient on the waiting list. In the same time the patient has written information about time and place where he/she should come for diagnostics (specialist or laboratory examination).

Germany: The goals of EHR for Germany are to establish more citizen-oriented services, support patient-centered care, improve quality and services, reduce costs, and provide better data for health system management. The infrastructure of the national e-Health system – the German Health Telematics Platform – is under implementation and will consist of connected Virtual Private Networks (VPNs), and special centralized infrastructure services. The existing applications include: online verification of insurance status (mandatory for citizens), transmission of (drug) prescriptions (mandatory for citizens), drug interaction and contraindication checks (voluntary for citizens). The Electronic health card is in practice. Regarding cooperation, Germany has agreements for exchanging medical data with its neighbors France, Austria, The Netherlands, and Denmark.

Hungary: Hungary started a National e-Health Programme (2004-2010) with the priorities: implementation of a comprehensive health and social monitoring system, establishment of telephone and online health information and advice services, regional demonstration pilots of integrated health information systems, modernisation of health and social information system, the implementation of eBusiness foundations for health services. The Internet access is provided in 99% of hospitals, 65% of pharmacies, and 33% of GP surgeries. The DRG-based financing data are transmitted electronically by 170 institutes, usually not connected with each other. Institutions provide outpatient services report data electronically using ICD-10 and national ICPM procedure codes. For now, there is no common EPR architecture available on national level in the country.

Romania: Romania has fulfilled the requirements regarding the legal basis needed for eHealth (including eSignature in health records) since 2004. There is a Ministry of Public Health

Strategic Plan for 2008–2010 where is stated the necessity of a new integrated health services information system with patient monitoring. Furthermore, private projects have been developed for achieving interoperability: the integrated system for the management of medical information (SIMIMED) using the HL7 standard (2007–2010), the Unique Integrated Information System of Social Health Insurances (SIUI) funded by the social insurance system (2003–present), and the improvement of accountability and transparency in the allocation and use of healthcare resources based on the Australian AR-DRG version 5 classification (2005–2007), in operation in all Romanian public hospitals. Starting 2008, a health evaluation program has as result collected health information on all citizens. There exists a national health insurance card using the European EHIC format.

Serbia: Important projects supporting the domain were developed in the late years in Serbia, including the EHR application as an important basis for interoperability at national and European level. The main benefits are the definition of the EHR content (anamnesis, results of examinations performed by a GP or specialist in chronological order, results of laboratory tests and examinations, list of prescribed medicines and drugs, X-rays, scans and other images, reports on hospitalizations, vaccination history, information on other treatments including type and location). The EHR is just an essential tool, but its key success depends on the creation of new services or products such as disease management services.

Slovenia: The strategic plan called e-Zdravje2010(e-Health2010) has been prepared for the implementation of IT in the healthcare system in Slovenia. It serves as the basis for the adoption of action plans written to accelerate the implementation of e-tools in the Slovenian healthcare sector. It covers information systems and services, combined with organizational changes. The strategic plan takes into account professional and business challenges of modern European health systems, such as: rising demand for health care services due to demographic changes, increasing expectations of patients, management of huge amounts of health information, the need to provideestablishment of the inpatient reporting data system, various other applications were developed

in health care, such as the electronic discharge letter, data monitoring system on risk factors for cardiovascular diseases, digitalized radiology by introducing PACS, connection among health service providers and laboratories, applications for management of emergency medical service, etc.

Reviewing the previously presented status of the healthcare systems in the mentioned area, we can conclude that there are some differences regarding the goals, approaches, demographic data, type of healthcare system control (centralized or not), GDP for healthcare and the amount for ICT. They are generally in line with the European recommendations, however. Step-by-step advancement, ensuring engagement for, and continuous support of, a pragmatic approach to flexibly develop and adapt a nation wide system creates an e-Health dynamics. The ICT tools already functional in one country of the area can be used also in others devoted to the common points we intend to identify during the discussions. We can start from the habits that are common for the area: the traditional diet is high in fats, carbohydrates, and sugar. Smoking is relatively common and most adults regularly consume alcohol. These habits determine the same pattern of diseases such as cardiovascular diseases and cancer on the first place. EuroHealth Consumer Index (2007) shows that Austria is first in the top of European Countries regarding patient satisfaction. So it can be a model for the neighboring countries that deal with the same risk factors and mainly the same diseases.

3. Mobility of Patients

Mobility studies on European patients conclude that it is very difficult to draw general, sweeping conclusions about patient mobility, its direction and purposes [4]. Two broad types of patients have been identified: patients receiving foreign care because they happen to be abroad when they get ill (e.g., tourists, long-term residents) and people going abroad to seek health care (living in border-regions or because of some relative disadvantage in the national health care system). Relative to the observed area, there are already some aspects that tend to be consistent. Austrian patients went in Hungary to have less costly treatment, or they sought an institution specialized in diseases of interest thereby saving costs and having a better expertise according to developed studies [5]. The regions involved are mainly South East of Austria and South of Hungary. Patients from Western part of Romania go frequently to treatment in the South Eastern part of Hungary. The common, relatively old history of Bosnia-Herzegovina, Croatia, Serbia, and Slovenia determine mobility in patients that can access treatment in different places. Following discussions regarding the subject of

mobility, we can identify common patterns and can document the need for interoperability of healthcare solutions.

4. Conclusions

As a result, the Workshop will target the conformance to international standards in applications present in the focused area. Connected to this aspect, the identification of overlapping applications, areas of competence, common health behavior, areas of, and reasons for, people's mobility, but also the identification of methods to improvehealthcare with minimum costs as well as appropriate national and European mechanisms can help to harmonize methods in order to reduce costs and save time, and mainly to have a healthier population in the area.

Further, if consistent and consensual, the results will be gathered in a paper that may be presented to national professional societies (Medical Informatics Associations, Medical associations) and administrative fore (Ministry of Health, Local administration) in order to add a new pressure on the society to move in a better direction.

Also, regarding education of individuals, a focused and coordinated set of regional actions can drive to building diseases risk awareness in the general public and among healthcare professionals that will have as consequence reduced risks and lower costs for the community. Connected to this topic the support offered by Patient Support groups that exist in each of the presented countries [6] can be added. It is to be discussed if the neighboring support groups maybe connected and if this action is feasible and can bring benefits.

The outcomes will be presented in a following workshop in 2011, at "E-health over borders without boundaries" MIE-STC Conference in Slovenia.

The program for the workshop is as follows:

 General EHR Status: Europe and World, Bernd Blobel

 Interoperability of healthcare systems in Hungary, Gyorgy Surjan

 eHealth in Slovenia, Andrej Orel

 Experience of implementing an EHR system in Serbia, Vesna Urosevic

 Romanian status of information systems implementation in healthcare, George Mihalas, Lacramioara Stoicu-Tivadar

 Linking GP offices to hospitals in Croatia, Josipa Kern

 Trends in Medical Informatics in Bosnia-Herzegovina, Izet Masic

 Conclusions

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