Patient Empowerment through eHealth Portal in Bosnia and Herzegovina

Zoran Gajic1, Sonja Sipka2, Jacob Bergsland3, Ozren Kordic3, Milan Mandic3, Danijel Pajic3
Exit IT Business Support Centre, Banja Luka, Bosnia and Herzegovina
University Clinical Center Tuzla, Tuzla, Bosnia and Herzegovina

SUMMARY: This paper covers two on-going interconnected eHealth projects in Bosnia and Herzegovina: eHealth Strategy for Republic of Srpska [a political entity in BiH], and eHealth Portal and eLearning in Continuing Medical Education for BiH, as a part of the project called Improving Governance and Interethic Cooperation in BiH through eHealth (eHIGiCo BiH). eHealth Strategy defines roadmap for introduction of eHealth in Republic of Srpska, based on 4 strategic pillars [management, foundation projects, implementation and information integration projects]. As an implementation step of the strategy, eHIGiCo BiH concentrates on introduction of BiH eHealth portal as a tool for “patient empowerment” where citizens are encouraged to take an active part in their own health management. Growing in popularity and application this concept presumes that empowered healthcare providers support patient control of their healthcare. On the other side, eHIGiCo BiH concentrates on healthcare professionals through provision of all relevant information in one place and/or links for the same. It also offers Continuing Medical Education (CME) online, where health care professionals will have access to online courses, seminars and teachings automated credit system. This project is supported by and in cooperation with Ministry of Health and Social Welfare of Republic of Srpska and Ministry of Health of Federation of Bosnia and Herzegovina. Keywords and phrases: eHealth portal, eLearning, CME, patient empowerment

1. EHEALTH STRATEGY FOR REPUBLIC OF SRPSKA

Adopted in 2009 by the Ministry of Health and Welfare of Republic of Srpska (MoH RS), this document creates policy framework for all future eHealth related projects in RS for the next 8 years period of time. Correlated with EU strategic initiatives (iEurope 2010 and eHealth ERA Coordination Action) and the World Health Organization recommendations, the Strategy, the document envisages establishment of a “patient centric” healthcare system, based on integration of health related information, which can be connected to tomorrow’s EU integrated eHealth network (1,2,3,4,5,6,7,8).

26 eHealth core project are grouped in 4 strategic pillars:

- **Programme Management and Implementation** – establishment of eHealth steering committee and executive body & education of end users;
- **Foundation eHealth projects** – network infrastructure, electronic registers of patients, professionals, institutions and services, terminology server;
- **Implementation of Basic Systems** – Electronic Health Record, Electronic Medical Record, Intelligent Cards, Hospital Information System, PACS, Telemedicine, eLearning in CME, eLaboratory, Health Management Information Tool...
- **Information Integration and Communication** – National eHealth Data Centre, semantic and technical interoperability standards, security and national eHealth portal on mother tongue.

An incrementing approach in the strategy implementation has been suggested, based on gradual involvement of robust systems, though combination of successful legacy systems with new capacities, that steady build repository of consolidated and integrated data needed for better healthcare. **Phase 1** will provide credible access to the priority health data, both for professionals at the points of care and for patients when needed, independently of geographic location. In practice, it means that foundation electronic registries will be established. **Phase 2** leads towards introduction of basic eHealth systems, providing access to clinical data and later to integration of those data. Finally, **Phase 3** means integration of health information, based on international eHealth standards. Here it is where access to variety of eHealth applications for citizens will be provided through eHealth portal.

2. BIH EHEALTH PORTAL AND ELEARNING IN CME

“eHealth” portal and eLearning in CME are two main components of eHIGiCo BiH project which is developed by EXIT Centre in cooperation with Interventional Centre Rikshospitalet in Oslo, Norway and funded by Norwegian Ministry of Foreign Affairs (9,10,11,12,13). Its local implementing partners, as previously mentioned, are both Ministries of Health in BiH.

“eHealth” portal is a common component of all eHealth systems
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Figure 1. National eHealth Network of Republic of Srpska

across the Europe. It is a starting point for searching for variety of information aggregations and services available online. BiH “eHealth” portal is to serve as a platform to host various online interactive services, used by citizens and healthcare professionals on everyday basis. This approach will make them more mobile, independent of paper work and provide them with timely and accurate information. Healthcare management will be enabled with basic health management tools to contribute to improved accountability and transparency in their work.

Patient empowerment is one central element in the EU health strategy. The current EU “Programme of Community action in the field of public health (2003-2008)” includes actions on the quality of health information at web sites and the launching of the Health Portal to serve European citizens (4). The proposal of the next “Programme for Community Action in the field of Health 2007-2013” relies on three main objectives:

- Improve citizens’ health security;
- Promote health for prosperity and solidarity, and
- Generate and Disseminate Health Knowledge

3. CURRENT SITUATION IN BOSNIA AND HERZEGOVINA

Health care systems in Bosnia and Herzegovina are facing numerous challenges created by various external and internal factors. Burden of low efficiency, high unemployment rate, obsolete technology, with part of existing companies to be considered as relics of old system, low health care contributions collection level, all represent challenges for the development of sustainable healthcare system in Bosnia and Herzegovina. Weaknesses related to efficiency, equality and quality of services require in-depth reforms (14,15,16,17,18).

Main problems identified in the sector are:
- Inequality and injustice
- Inadequate health insurance coverage and control of healthcare contributions collection.
- Imbalance between rights and available funds
- Inefficient organization of the system and services
- Low quality of service
- Health care corruption
- eHealth portal goals and objectives:
  - Provide reliable and up-to-date healthcare related information in mother tongue
  - Improve inclusion of citizens in healthcare delivery chain
  - Better interaction between health care providers
  - Healthcare quality measurement
  - Create quality information channels
  - Lifelong learning / e-learning and CME

4. PUBLIC HEALTH STATUS AWARENESS

Due to the systematic nature of the eHealth portal development, the portal is going to be introduced in 2 phases. Phase 1 is primarily oriented towards information delivery with low level of interaction and Phase 2 is oriented towards the integration of VAAs (Value Added Applications) and introduction of interactive services. According the eHealth Strategy, in the future there is a potential for the eHealth portal to grow into the complex online service which will be interconnected with various other existing services.

eHealth portal is a healthcare-focused informational and educational tool oriented toward citizens and healthcare providers of Republic of Srpska and Federation of Bosnia and Herzegovina and through high user focus and direct connection to relevant healthcare bodies has potential to establish synergetic relationship with healthcare providers, healthcare and educational institutions whose employees and academic staff shall be a primary source of high value content for the portal. People need to be educated on the hierarchy of the health organizational structure, health insurance, services available, fees, doctors in the area, referral procedures, etc.

Services and products offered on the eHealth portal are differently oriented towards different user (target) groups:

5. PATIENTS

The widest user group, and services and products offered to the same, are primarily in the form of information provision with the higher goal of patient empowerment. Patient empowerment is one of the central elements in the EU health strategy. With National Health Authorities, EU Bodies, European Council and WHO-Euro backing the patient empowering ideal. The European experience on eHealth patient empowerment has been in the main oriented to: providing access to trusted information and advice, supporting patient education for health literacy, implementing the process for the patient to access and manage their health data (e-PHR), increasing patient security and convenience (e-Appointment and e-Prescribing), facilitating on-line health behavioral modification (self-care) and supporting new models for chronic care (e-Chronic Care).

At the BiH eHealth portal patients will have access to:
- Latest news related to health
- Information on health organizations and events
- New and improved products offered by the sponsors
- Opportunity to “Ask the Doctor” a specific question
- Advanced search engine (search
for terms, illnesses, conditions, institutions etc.)

- Quick access to quality up-to-date information, service comparison
- Chronic diseases treatment information
- Younger generations with the convenience of the access to the information and ability to help their elderly without taking time off from work in order to do the same
- In the future, the ability to make an appointment with the family doctor or a specialist
- Information on available drugs and where can they get them
- Secured personal information
- Other

6. HEALTHCARE PROFESSIONALS AND STUDENTS

This user group will be providing services to the eHealth portal as well using the services offered by the portal. This section will concentrate on the services that will be provided to the healthcare professionals. Healthcare providers will be provided with latest technologies that support their interaction with patients, either on direct or remote contacts (telemedicine), integrated health information systems that provide wide range of information about the patient, collected from different geographically distributed sources. Besides all of these benefits of the eHealth portal, the following services will be available as well:

- Latest news in the form of videos, podcasts and articles;
- Information on professional societies, chambers, associations, agencies, etc.
- Job Vacancies;
- Professional Education (seminars, conferences, workshops, specialization, projects, grants, scholarships, etc.)
- Drugs and products (find a drug, law regulative, warnings and recalls, drug therapy, drug interactions, etc.)
- Library (resources, books, articles)
- Medical Law Regulations (ethics, strategies, policies, etc.)
- Better communication between different institutions
- Aggregation of relevant information in one place
- Confidentiality of information
- Workload unloading (administrative reporting, electronic communication, etc.)
- Access to new information which can ease and better their work (staying up-to-date on patient trends, new medications, treatments, etc.)
- Continuing Medical Education online
- Upcoming events and trainings
- Other

7. ELEARNING IN CME

Skilled physicians, nurses, administration and management in health care sectors are a key to successful reform of health systems in Bosnia and Herzegovina. Being up-to-date with information currently available in mother tongue is rather hard, since processes of adoption of new educational material and its distribution are a long term process. Supply side seen in chambers of doctors of medicine cannot cope with demands from healthcare providers’ side. That is where eLearning can be used as a boosting element, providing quick and wide access to up-to-date educational content. Transfer of Norwegian experience is of particular importance here.

CME portal’s mission is to contribute to better and more efficient continuing medical education for health care professionals. While having access to important CME information, ability to register for CME activities and attend online course, thus, putting emphasis on user friendly experience. This approach improves the motivation of health care professionals to promptly manage their own professional development.

Based on conducted research health care professionals find it difficult to dedicate time and/or travel to distant locations to participate in CME activities. As a solution CME Portal will offer e-Learning courses where the health care professionals can maintain their professional development at own pace, time and location. At the same time the content available on the CME Portal will undergo accreditation process by highly qualified personnel to ensure quality education.

8. RESULTS OF THE PROJECT

“eHealth” Portal will be developed in mother tongue, which will help forming technological internationally interoperable communi-
cation framework for implementation of the project goals. Citizens, as well as the health care professionals should benefit through use of these services – citizens will be able to use interactive services to broaden their knowledge, while health care professionals will be able to learn at their own pace, in their own time. This will motivate organizations and individuals to actively participate in eLearning in CME. The Portal should be easily replicable on other countries in the region, should receive political support and provide transparent information (which will keep users’ satisfaction on a high level), as well as raise awareness among citizens about benefits of eHealth.

9. INDICATORS
• eHealth Portal developed and filled in with the quality content on mother tongue.
• eHealth Value Added Application developed, tested and integrated into portal framework
• Health Care Consumers and Providers use them
• eLearning System for CME established and tested
• 4 local online pilot courses produced and published
• Online users registered on the system and attending courses
• Raising number of requests toward participation in the eLCME Programme
• eLearning in CME Accreditation and Certification Authorities established
• Established legal framework for eLCME syllabus accreditation and certification of success on such programmes (“eLCME Syllabus Accreditation Authority” and “eLCME Certificate Issuing Authority”)
• Content Providers for eHealth Portal identified and contracted
• Developed all business plan, technical specifications and guidelines documents
• Norwegian online educational content for physicians and nurses translated on local language and customized for local professional purposes, according rules of Accreditation Board.
• Developed benchmarks for system’s standards of performance
• Provided feedback mechanisms for continuous improvement of performance
• Authorities of boards expanded toward more medical and accompanied sectors, providing more participants that actively participate in the system functioning (e.g. more contributors to content providing, more eLearners,..)
• Raised number of users of the system in all target groups
• Created positive climate toward expansion of the project on Western Balkan region.

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Corresponding author: Zoran Gajic, EXIT IT Business Support Centre, Banja Luka, Bosnia and Herzegovina. E-mail: zoran.gajic@exitcentre.org