

HORIZONS AND PERSPECTIVES EHEALTH

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EHealth platform represents the combined use of IT technologies and electronic communications in the health field, using data (electronically transmitted, stored and accessed) with a clinical, educational and administrative purpose, both locally and distantly. eHealth has the significant capability to increase the movement in the direction of services centered towards citizens, improving the quality of the medical act, integrating the application of Medical Informatics (Medical IT), Telemedicine, Health Telematics, Telehealth, Biomedical engineering and Bioinformatics.

Supporting the creation, development and recognition of a specific eHealth zone, the European Union policies develop through its programs FP6 and FP7, European-scale projects in the medical information technologies (the electronic health cards, online medical care, medical web portals, trans-European nets for medical information, biotechnology, generic instruments and medical technologies for health, ICT mobile systems for remote monitoring).

The medical applications like electronic health cards ePrescription, eServices, medical eLearning, eSupervision, eAdministration are integral part of what is the new medical branch-eHealth, being in a continuous expansion due to the support from the global political, financial and medical organizations; the degree of implementation of the eHealth platform varying according to the development level of the communication infrastructure, allocated funds, intensive political priorities and governmental organizations opened to the new IT challenges.

eHealth Background

Healthcare has a superior place in the international political agenda due to the increase of the differences between poor countries and the rich ones, both economically, socially and from the point of view of the people health state. The world nations mutually agreed with the growth of the life standards and implicitly of health, these being fundamental human rights, irrespective of race, religion, economical and social policy. "Health, priority number 1 in Europe" it is not anymore a generous motto but it is applied through the use of medical technologies from the Informational Society, technologies which can improve the services provided to clients, raise responsibility to healthcare workers and increase efficiency of the health funds.

Health systems, as a fundamental part of the economical infrastructure, take fully advantage of the latest upgrades in IT and communication technology, especially in the last decade. The modern medicine, dependent of ICT in the imagistic exploration, electrophysiology (NMR- nuclear magnetic resonance, CT- computer tomography, ECG- electrocardiography, EEG- electroencephalography, Echographies) uses the IT applications in various medical fields (functional explorations, analytical diagnostics, toxicology, pharmacokinetics, phytochemistry) allowing a new image on that field.

eHealth realm is the zone that reunites Health Informatics (Health IT), Health Telematics, Telehealth, Telemedicine, Biomedical engineering, Bioinformatics the Public Health, the basic level being Information Technology and Communications and the Internet. In a larger meaning, the term characterizes the technical development in the medical branch with the help of the local, regional and international health

resources, but also with the global way of thinking, having a net attitude and behaviour. If in the last decade the health field was lagging behind, being after other fields in using IT, now eHealth technology is a constructive domain with an extraordinary potential for an intensive development. eHealth market, having a 2% in Europe (from the total expenses of health services) has an increasing level of development, reaching in volume the market of medical devices and unlike this one, eHealth applications are not yet known and used at their real value and dimension in all the UE countries, varying as level of implementation because of insufficient evaluation from the point of view of the impact, benefits and medical applications safety.

The European Commission's action plan in the health zone has encouraged, supported and developed an extended field of applications since 2003, containing electronic medical records of patients and electronic medical files, electronic health cards, electronic systems and services for reducing waiting times and errors, inter-operational platforms, Telemedicine and Telehealth applications.

European Union and its health policy

Health for people is a key element for all European Union governors. The conversion from the traditional health strategies to the eHealth plan (the medical practice using modern communication means) was unavoidable, the step made by the Ministries of Health, started in May 2003 through adopting the eEurope implementation plan, as a component part of the European Action Plan eEurope-2004. The European plan is believed to be a vector of major political, social and informational changes, identifying the interests of the member countries and the medical IT present situation, offering a favourable frame for experience exchange, encouraging mutual international approaches. The European Community Research programs have been supporting for more than 15 years the eHealth zone, contributing in developing a new industry that has the chance to become the third as importance in the medical field. The European eHealth field has continued its growth through the European Action Plan eEurope-2005 that landmarks the following objectives:

- The electronic health cards will be adopted by all EU countries until 2008, replacing paper, being functional in medical health insurance, medical emergencies, having security access to the personal data, supporting the medical tourism and increasing patients' degree of decision.
- Online medical services- Medical Web Portals (since 2005 these online medical assistance services have been created, providing people with general medical information). The medical portals include general information (advice for healthy living, maintenance of the status within normal limits, on-line clinical advice, teleconsulting) and continue with administrative services like e-investments or medical data supplied to the government and citizens.

The European Framework program FP6 and FP7

The European Union research programs, united under the name of Framework Programs for Research and Technological Development-RTD come to complete the national and regional programs and concentrate European resources in different fields until the formation of a critical mass of advanced technologies, important for the European competitiveness increase. Under a Framework Program umbrella, the European Union includes a series of specific programs which define in details the European research in a certain field. Since their launch in 1984, the framework

programs have been playing a main role in the multidiscipline research and in cooperation activities in Europe and in the world.

Within the FP6 (2002-2006) the accent falls towards the finance of the research projects, uniting different European actors (universities, research institutes, companies, governmental organizations). The final aim of this effort is the creation of an European Research Area-ERA. The objectives established in the Framework Program 6 (FP6) ensure in Europe the technological progress continuity, with accent on the development of the future generation technologies, defined by computers and networks which are integrated in everyday activities, facilitating access to a multitude of services and applications through easy-to-use interfaces (the „user-friendly” type). The vision of “intelligent environment” places the individual user in the center, through introduction of IT society in every home (private environment), school (education) and company (business). In order to accomplish the objectives of the Lisbon strategies, progress is necessary to be made in the following technological fields of great interest: the surpass of the actual limits of the technological miniaturization and the monitoring of the costs and resource consumption of the microelectronic components and of microsystems; the development of the infrastructure of mobile communication , wireless, optical and broadband, as well as software technologies which are compatible one to each other and able to manage new applications and services. The development of common standards and open source software (the user can customize according to their needs), the development of intuitive user-friendly interfaces that can perform human speaking, touching and seeing as well as gestures and different languages will be encouraged, in order to ensure that the new technologies are adaptable and can be a basis for the future innovations.

The sub-objective of the 2005 eEurope plan in the medical field is represented by the importance of the citizens’ on-line access to the medical services (information regarding healthy living, illness-prevention, electronic medical statistics, teleconsulting). Medical information is among the most wanted information on the net and, thus, the importance of their quality appears (a quality framework was proposed for the “medical websites”). Under the slogan of “Information Can Save Your Life” the European Commission monitors the activity of the member states regarding both access to medical information and implementation of quality criteria.

The Framework Program FP7 for technological research and development is the European Union main instrument to finance the research in Europe, applicable in 2007-2013 period, the program being structured around the socio-economical objectives: future-extended networks (an extended informational infrastructure will link people, organizations, devices), dynamic, safe and sturdy networks, more intelligent machines, more efficient services (ICT with incorporated intelligence, able to think, to learn and interact with people), innovations in the product of the future, Digital Content \$, eLearning, Environment, energy and transport, access for all, progressive and future technologies, eInfrastructure.

The challenge called “Healthcare Revolution” has the aim of improving quality, approach and efficacy of the medical healthcare system through research in different fields: administration, biomedicine, personalized treatments, new medicines and others. The Healthcare Revolution is a big challenge as the medical system amounts 9% of the European Union GDP. The accent falls on the importance of the eHealth industry, estimating that at the end of 2010 about 5% of the total health budget will have been spent. Within FP 7, the activities developed are: biotechnologies, generic instruments

and medical technologies for health (the extended zone for complete research, detection, diagnosis and monitoring, opportunity prediction, therapies security and efficiency, innovative therapeutic approaches and interventions), medical research results transfer, optimization of the health conditions for the European citizens (implies the using of clinical results in the medical practice), quality, efficiency, health systems' solidarity, development of the homecare strategies and the proper use of the new therapies and technologies.

The EU Framework Program FP7 with the objectives ICT-2007.5.1 “Personal health systems for monitoring and objectives for establishing the diagnostic” focuses on personalized monitoring (patients' health status) for people with risks or chronicle diseases, special clothing for body stimuli detecting and mobile/portable ICT systems, remote monitoring and adjacent services, multi-parameter information (psychological, biochemical, location, activity, social context and environmental, intelligent systems for multi-parametrical correlations of data through intelligent biomedical systems), interoperability within electronic medical records.

eHealth Concept and Realm

In 2001, the article “What is e-Health” published in the magazine „Medical Internet Research” no.3, Gunther Eysenbach, the eHealth researcher defines the field this way: e-health is a field at the intersection of the medical IT, public health and business, approaching the medical healthcare and supplied information with the help of the Internet or other technologies.

eHealth covers an area of permanent interaction between patients, professionals, suppliers, institutions and organizations among which there are actions of medical preventing, diagnosis, monitoring, education and commerce. The technological and informatics support includes physical networks, medical apparatus (portable devices, personal monitors), databases in which information about acute and chronic patients are stocked and accessed, electronic files and records, centralized electronic medical information. eHealth system in the vision of the Pittsburg University researchers is presented as follows:

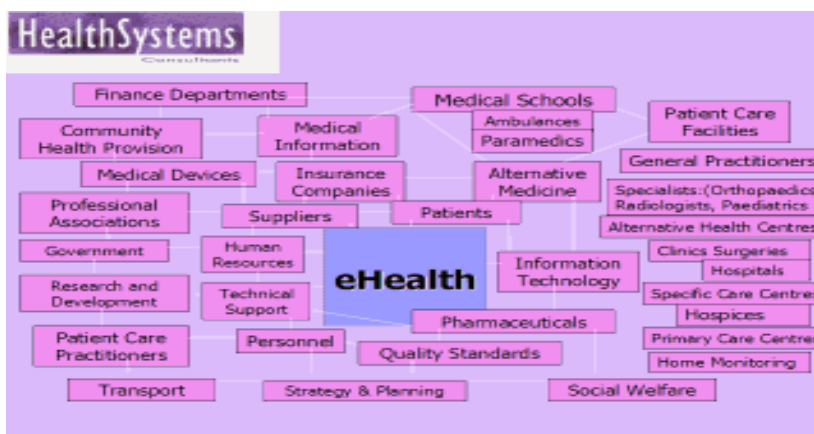


Figure nr. 1: eHealth system in the American vision

Source : data taken from the Pittsburg University site
<http://www.pitt.edu/~super1/lecture/lec12181/index.htm>

According to the progress of medical science and of latest generation medical technologies, eHealth platform comprise in the present the following structure (developed and sustained by the Program FP7 funds in the area of medical biotechnologies and of intelligent biomedical systems.

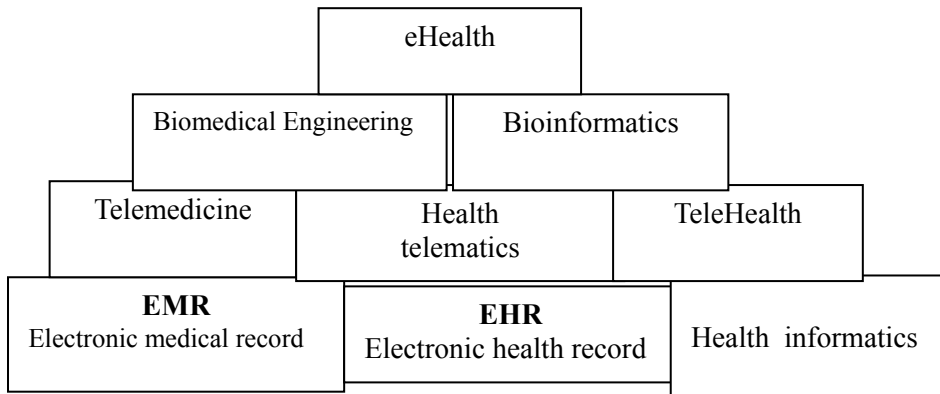


Fig.2: Technological components of the eHealth platform

Socially, eHealth refers to the way of using and utilizing the modern technology communication to meet the needs of the citizens, patients, medical professionals, medical suppliers and political leaders, also (ministerial declaration, ITU-D, ITU Workshop on Standardisation on eHealth, 2003).

EMR(Electronic Medical Record) are digital collections of medical records. **In the medical IT the electronic medical records are the most important category, and together with EHR (electronic health record), it forms the raw material to be processed.** Sometimes, in medical theory and practice, the two terms are both understood the same, being synonyms. The medical term EMR is dependent of another specific term from the Medical Informatics, namely HIT (Health Information Technology), and together they turn the general medical information into information for medical management systems. The development of the standards for the EMR interoperability is a central point on the agenda of the international health ministries and organizations, the interoperability of the IT platform being the ability of different technologies, software applications and IT systems in the consistent, clear and objective data exchange. When the EMR interoperability standards are lacking, the doctors, pharmacists and other medical staff cannot efficiently make the exchange of data, creating deficiencies in the medical services management. The EMR large scale implementation is restricted because of different software, hardware and technologies, the EMR recent systems being developed on Visual Basic and C++ platforms, differing from others developed on Microsoft NET Framework and Java platforms.

EHR(Electronic Health Record), refers to the individual medical records of every patient in digital format. The Electronic health records systems sustained by the individual records with the help of computers, form, in its whole, the so-called EHR system, accessed on net, the medical data being visible from different locations. . EHR-based systems can reduce the medical errors, optimize decisions and decrease the costs of the medical system. For the most users, the terms EHR and EMR have an interchangeable meaning only in the medical informatics, EHR defines a global concept and EMR only distinctively and separately localized records. The electronic health records contain information about medical treatment, the patient’s medical background,

lifestyle, lab results. Usually, the healthcare providers deliver and offer, in a controlled and secure way, access to the own medical records for the insurance companies, governmental agencies, medical staff or to the general information desks. The data stored in the electronic health record database include: demographic aspects, medical background, reports on the progress of health or illness state, lists of immunizations, allergies, laboratory tests, radiological images (X-ray, CT, MRI), endoscope, laparoscope or clinical photos, etc. The classical health records on paper are more and more prone to errors, deficiencies, omissions; the electronic records are preferred to the standardized forms, with stipulated terminology and abbreviation.

Telemedicine defines the area of services offered by the medical specialists through the use of communication technologies and remote sending information, with a view of establishing a diagnostic, treatment, research and evaluation for the continuing training of the health system staff. The telemedicine services use the telecommunication technology for providing remote services and remote medical advice, eliminating the geographical, time, social and cultural borders. (J.Reid, 1996). The area covered by the telemedicine includes: remote tele-examinations, telediagnosis, on-line clinic research, the continuous training of the medical providers on the Internet, digital medical libraries, medical video-conferences and a second medical opinion. The success of introducing a Telemedicine service is essentially linked with the possibilities offered by the services providers or the telecommunications operators both regarding access to the infrastructure of telecommunications and of the transport of information at the local, regional or national level: the telephone digital network, ISDN network, mobile phone network. Uniting classical methods of access (classical telephony network, fix and mobile radio access) there can be achieved an extended range of eHealth type communications: voice (telephonic medical examinations), data (electronic mail- email) and Telematics (for punctiform problems), Voice-data, image in different moments (electronic medical files, the collective exploration of the clinic images), voice-data in real time (medical telesupervising of the vital signs: pulse, blood pressure), voice-data-images in real time (classical telemedicine, virtual medical examination). Telemedicine develops clinically the following intervention zones:

- Teleradiology developed on the basis of classical radiology, computer tomography, nuclear magnetic resonance and ecography, allows the obtaining of a primary diagnosis as well as assisting the image diagnosis with a second opinion;
- Telepathology represents the primary interpretation of the pathological image and also a second opinion in difficult cases, containing two main categories of telepathological examinations (static images and video-microscopic);
- Teledermatology unites static images, in move or mixed in dermatological field;
- Tele-consulting (examinations) are remote examinations offered by the specialist physicians to the patients sustained or assisted by the local generalist physicians and renders advantages like: reducing costly transportation, access to quality medical care;
- Public health telemedicine has applicability in the areas of epidemiological supervising, information system development for sanitary education and illnesses prevention.

The use of telecommunications/tele-consulting varies from different countries due to the level of technology, living, finance or national policy. Security, confidentiality and the biometric methods used (voice recognition, touch practices, special clothing

with biosensors) can be medium-term solutions to study. Webcams or other real time video message services (virtual transmissions) “face to face” (physician-patient) used for patients are necessary platforms for communication within medical relationships. Through teleconferences, physicians can have relevant information daily and medical analysis instruments.

Telematics for health (interactive-health telematics television) represents the use of ICT combined with data acquisition technologies in order to realize the applications for home supervision of the patients. The diverse range of telematic applications are used to monitor the patient health behavior aiming at the continuous supervising and monitoring the clinical conditions from the medical unities or the degree they accept and follow the medical prescriptions, eliminating the necessity of long-term hospital stay. The backbone of the tele-homecare intelligent systems, the medical Telematics sustain an independent lifestyle for patients, having the following advantages: supervision services at the patient’s home, easy-to-use interface, education of patients in using the personalized video, motivating feedback, real time messaging, enhance of doctor-patient interaction.

TeleHealth or mHealth (health monitoring) connects the following medical fields: communication technologies, information technologies, technologies of man- medical device interface, medical research, tele-healthcare , health education. Telehealth is the operation of delivering health services, information and other services through telecommunication technologies, ranging from simple communication through classical telephonic wires (telephone) to complex communication like videoconferences, that can ease the communication between two medical providers or even two countries, with the help of communication technology or electronic robots.

TeleHealth is an extension of the telemedicine and unlike this one (which focuses on the curing aspect) it encourages the prevention, motivating medical aspects and technological solutions, for example the use of the email among specialists for communication between patients, for medicine prescription or for other health services supply.

Health Informatics or Medical Informatics represents the development of informatics systems for the identification, collection, store and analysis of the data used within medical care services. Medical Informatics is the field that combines IT, computer science and health systems. Medical IT works with instruments (computers, clinic guides, medical dictionaries and information and communication systems) used in its sub-domains: clinical IT, nursing IT, imagistics, services consumers IT, public IT, dental IT, clinical research IT, bioinformatics, pharmaceutical IT. The extended scope of medical IT unites the following areas: different architectures of electronic medical records and other medical information systems used in research and planning, support systems for decisions including the clinic decisions systems, DICOM, HL 7 standards, the use of a medical universal vocabulary (Systematized Nomenclature of Medicine), the use of universal clinic terms, clinic management systems and support for decisions.

Bioinformatics and computer biology incorporate applications of mathematics, IT, statistics, computer science, artificial intelligence, chemistry and biochemistry for studies, researches and innovations at molecular level. Researches in the computer biology takes over theories from the biological systems and the research efforts include areas like: sequential alignment, genomics, and predictions in protein structure, interaction and modeling of human species evolution. The final goal of this science is both to allow the discovery of new knowledge in biology and also to create a global perspective from which the unifying principles of biology to be distinguished. There are

three major research directions in bioinformatics: the development of new algorithms and statistics with which help to be extracted from a large number of data, those elements which have common features, analysis and different types of data interpretation referring to sequences of nucleotides and amino-acids, protein structure, development and implementation of some instruments to permit the efficient access and manipulation of different types of information.

The instruments of the eHealth technology

The most developed measure instruments of the eHealth technology put into practice are EHR applications (electronic health records), the medical portal WEB and ePrescription application.

EHR applications or Electronic Health Record- are IT systems based on a technological and informational infrastructure (patients' electronic files) from the medical organizations. The development of EHR platform and application or Medical Data Registration System at patient's level, proves the positive aspects of ICT introduction in medicine, afterwards the efficiency of medical data stored, processed and transferred in medical IT systems (the increase of medical data number, Internet access possibilities, patients' mobility- the medical tourism) are good premises to take into account. EHR degree of development and implementation differs according to the rhythm of the social, economical, financial development, and also of the specific medical systems and ICT implementation degree.

The more than 10 year experience of Scandinavia (Norway, Denmark, Sweden and Finland) continues through projects having the motto "Move the data not the patient". In countries like Lithuania, Germany, Poland, EHR forms an electronic European platform with open access to every partner from the member countries.

The US eHealth systems began with the implementation of the Health Record System – EHRs and together with the objectives of quality improvement, the broadening of the communication band are put into practice by some organisms like Veterans Administrations (VA), Intermountain Healthcare, Partners Healthcare, USA Defense Department, Indian Health Services and other public and private organisms. The concretization of efforts to extend EHR domain have been carried out in 2007, when the American Hospital Association reported a percent of 68% of the implementation degree of the Health Record Systems – EHRs, 11% of this percentage being at the level of hospitals (urban and university hospitals).

Six European nations report the current and extended use of the local health registers, out of which, two countries have platforms of electronic health records that are used restrictively (Luxembourg and Denmark). Germany, Sweden and Turkey have developed a minimum structure and a minimum set of data from patients, and Check Republic has a weaker representation of the electronic health record system. EHR application has an advance state of implementation and utilization in Canada, Australia, UK, Belgium, Italy, Austria, having an increasing market in the eHealth applications. For enlarging the complexity and openness of the eHealth in England, the implementation of the national data network (N3) begun in April 2004, of the Personal National Network and the Messaging Service in December 2004, continued with the introduction of PACS platform Digital Pictures Archiving and Communication Systems in 2005. In Romania, intensive efforts have been made since 2006, when the Ministry of Health decided the compulsory introduction of the IT systems of collecting data and their report to analysis and financial management.

The web medical portal or health portal is a web community that offers, in a secure way, a personalized interface according to content, application, services, roles and participants' preferences, representing connecting gates to Internet, offering access to health pages, relevant medical sites and also connected specialties, having facilities like e-mail, messenger, lists and discussion groups, specialized portals in other fields, addresses of specialized institutions, private or state clinics, hospitals, providers of sanitary materials, medicines.

Through the medical portal, there are transferred to the applicants information and transactions with different degrees of complexity, ranging from simple medical articles (studies, online books, documentations, interactive courses) to the access to different online international medical journals (British Medical Journal, The Journal of the American Medical Association), authorizations of access to different applications, links to the peripheral medical domain. The links to the external sites are carefully selected through the quality criteria of medical information, on the portal there are pages with secure personal information for every patient recorded in the official data base, personal health data, medicines lists, medical tests and analyses, copies of medical letters, clinic recommendations and observations, individual bibliography. Every European country has developed this application, varying in complexity, extension, degree of information actualization on the portal. The platforms for electronic messages and public monitorization of data and Warehouse type applications are on the lists of national priority. In Ireland there is a messaging project allocated to the generalist physicians who develop electronic communication system being half way between primary and secondary services. In Romania, the medical portals frequently accessed are: eMedic.ro, romedic.ro, medicalinfo.ro, informatii-medicale.ro.

The Electronic System of Prescription- ePrescription and Medical Transmissions (Electronic Transmission of Prescriptions) or ETP program, supplies general prescription services for the different levels prescriptors, electronically transferred information among them, pharmacies and medicine providers through InInternet. eReception application represents the electronically and urgently transmission of a digital network from a hospital, consulting room, clinic to one of the pharmacies included in an Extranet system- VPN. The inboxes can hold the ePrescription application for the patients who had not specified a certain pharmacist or who had not chosen one, patients who have a big professional flexibility or leave their working area. If the patients know which pharmacist is allocated to them, the physicians can send the prescriptions through ePrescription application to a pharmacist recorded in the data base. When receiving the recipe online, the pharmacists can check the stocks and prepare the recipe in advance and in due time. The ePrescription System is functional in England, Finland, Greece, Portugal, Spain, Sweden and Northern Ireland.

eHealth- an European reality

In an Europe in which citizens are increasingly mobile and borders have been eliminated there is a need to knowingly build an integrated and interoperable health space. Health Ministries record big changes and challenges socially, economically and politically for a 4-5 year period, based on political initiatives in the eHealth field. On April 17 2007 at the Conference in Berlin named "eHealth in Europe- Let us make it together" with the motto "European cooperation in the electronic space of healthcare", the member states declared their intention to implement together the international program of funds allocations for eHealth platforms in Europe, materializing the

European Commission actions- the EHealth Area European Plan. New opportunities and risks in developing eHealth solutions should not be minimized, the citizens being protected from fake data and unauthorized access, through a legal framework named “European Data Protection Directives”. In different ways and times the EU countries started to implement the medical laws in IT in many areas, including laws regarding the patients’ rights (Belgium), public information (Estonia), digital signature (Czech Republic, Estonia, Leetonia, Lithuania, Poland and England).

Few countries are at the level of choosing between EHR options, electronic cards, medical portals and ePrescription. Slovakia is at the stage of drawing up feasibility plans including an Electronic National Health System, medical cards of patients and to choose between different technical interoperability standards that assure data transmission (HL7). Bulgaria is also at the stage of choosing a specific direction (eCards, EHR, information management services and WEB services for citizens).

The pre-condition for applying eHealth solutions in national and regional eHealth systems is the complete operationability of communication infrastructure. In all the countries there is a communication network and in most cases its function needs a broadband connection, a technical basis and semantic interoperability, secure data, organizational infrastructure and a law framework. The Scandinavian countries are representative in this respect. Starting with 2002 all the hospitals and primary health centers in Sweden are connected at the SJunet (federal telecommunication network which connects the pharmacies, health centers, local, regional or administrative councils). The number of eServices supported by the Sjunet, for example ePrescription and Telemedicine is increasing. In Denmark and Norway the eHealth national infrastructure is operational through which medical information is sent. In Finland the electronic networks are interconnected for changing patients’ different results. In Austria, the eCard national system check the insured-status of living citizens and eliminates the medical records of the dead ones. In Belgium the information infrastructure has as objectives interconnectivity of different health organizations. The extended interoperability framework, facilities for medical information exchange for the authorized applicants complete the panel of eHealth applications in Belgium.

In 2004, the European Health Insurance Cards (EHIC) were presented in 13 EU states, including Belgium and Germany. EHIC is notable for the system of reimbursement of health services costs between different institutions, avoiding problems of not filling unreadable forms, reducing administrative costs. The Danish infrastructure “ Danish MedCom” supports the electronic data exchange and a variety of electronic messages exchanged among different supplier services within EHR.

Electronic systems interoperability is medium developed in many countries, as an answer to the European plan eHealth. In Denmark, MedCom organization has already developed a platform for the technical standards and the necessary interoperability for messages. The Danish Health Data Network-as well as SNOMED CT(Systematised Nomenclature of Medicine Clinical Terms) are models in which the semantic interoperability is activated.

The patients’ mobility is another central point of the action plan eHealth and together with the system interoperability are objectives to reach in many EU countries. The approach of the electronic identification area (eCards) is made through allocating an independent access, the safety of services, the protected WEB zone, the basic electronic records and other services without a pre-definite location. The general results are visible in the context of using the “patients’ mobility” in Luxembourg and Slovenia.

TEN4Health project which involves companies providers of health insurance funds and hospitals from Austria, Belgium, Czeck Republic, Germany, Italy and Holland will promote in the future these financial electronic services.

Another relevant project for an extended Europe includes **NETC@RDS**, the pilot project for the infrastructure of pan-European zone in the field of health insurance, validating new actors of the 15 EU members. The project Baltic eHealth Network confirms the securization of the internet infrastructure and the pilot project of using Telemedicine and services like eRadiology and eUltrasounds is parted between Denmark, Norway, Sweden and hospitals from Estonia and Lithuania.

Until these initiatives will be integrated into a comprehensible reality and collaboration in eHealth field, the eRadiology and eUltrasounds are locally implemented in Ireland, England, France, Slovenia, Slovakia and Bulgaria. ePrescriptions will remain as a fundamental priority to be implemented in the future in 12 countries and also eCard applications, interoperability and standardization will be an initiative that should be materialized within a period of 6 to 10 years starting with 2008 in European countries and Romania.

“How can be possible that the development of eHealth platform to have such a big potential to revolutionize services for patient? We will move very quickly into a system where the patients will have their own smartcard and will have access to their own health records through a PIN (Personal Identification Number) and where can rapidly access the financial records”- suggestively expressed dr. Cristopher Skinner , the manager of the Neurology Hospital from Ottawa. The development of the eHealth platform will lead to an optimization of the resources allocated in health systems, advantages and awards extending in connected fields also.

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