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The Global People-centred eHealth Innovation Forum

Guest Editors
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European eHealth conference, hosted by the Health
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THE GLOBAL PEOPLE-CENTRED EHEALTH INNOVATION FORUM

Contents

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Papers

- Knowledge management as a key element for healthcare quality** 1
P Rivero Corte
- eHealth governance: the Spanish approach** 3
E Gil Zorzo, L Lozano
- The Global People-centred eHealth Innovation Forum** 7
AR Jadad
- PAHO/WHO: eHealth conceptual model and work programme for Latin America and the Caribbean** 10
M D'Agostino, D Novillo-Ortiz
- Beyond the gadgets: socioeconomic, educational and political implications of people-centred health enabled by eHealth** 13
S Eccles, S Muttitt, JC DiLucca, A March, M Winfield
- People-centred healthcare systems: opportunities and challenges** 17
Y Quintana, NM Lorenzi, M Shani
- Human-centred eHealth: current opportunities, challenges and the way forward for China** 25
Y Su, J Talburt, J Soar

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PAHO/WHO: eHealth conceptual model and work programme for Latin America and the Caribbean

Marcelo D'Agostino,¹ David Novillo-Ortiz^{1,2}

The Pan American Health Organization

The Pan American Health Organization (PAHO) functions as the technical health agency of the Organization of American States as well as the regional office for the Americas of WHO, and enjoys international recognition as part of the United Nations system. Member States include all 39 countries of the Americas including Puerto Rico as an associate member.

As part of its knowledge management and communication strategy, PAHO is developing a series of projects and initiatives for every country office, specialised offices, centres and member states. The PAHO eHealth programme's goal is the improvement of public health in the Americas through the use of innovative information and communication technology (ICT) tools and methodologies and will showcase PAHO's engagement with the concepts and initiatives of the Information Society, Public Health 2.0, Medicine 2.0 and eGovernment in the region of the Americas.

eHealth in the United Nations

In 1998, the document 'Health for all in the XXI century',¹ requested by WHO, recommended the adequate use of health telematics in the general policy and strategy of health for all. During the same year, resolution WHA51.9² also defined the lines of work concerning cross-border advertising, promotion and sale of medical products using the internet.

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In 2003, the Summit on Information Society addressed cyber health as an ICT application which could improve the quality of life of the population. In 2004, the report EB115/39 and the resolution EB115.R20 stated that it was necessary for the member states to define cyber health strategies based on the principles of transparency, ethics and equity for the development of the necessary infrastructures and multisectoral collaboration in the public and the private sectors.

In 2005, the 58th World Health Assembly established the following as the foundation of WHO eHealth strategy:

- to participate in the development and promote the use of norms, standards, guidelines and information and training materials;
- to reinforce the capacity of member states to deal with health issues by integrating eHealth applications into health systems in order to improve performance, care delivery and information mechanisms;
- to foster public–private partnerships in research and development for priority eHealth systems and applications for the benefit of the member states;
- to support capacity building and to provide technical assistance and policy guidance on implementation of eHealth applications;
- to investigate, analyse and document the impact of policies and interventions on the health of the population, including social and economic ones, related to information and communication technologies.

In this way, the first steps were taken for the development of the eHealth strategy and agenda for the Member States.

eHealth strategies: definition, characteristics and impact

The word eHealth was selected because tools such as *Google Insights for Search*³ (programme of search statistics which compares volume patterns across specific regions, categories, time frames and properties) state that during the past few years eHealth was the most frequently used word when

internet users searched for information on this topic, in addition to other important terms such as telehealth, telemedicine or digital health.

According to the Wikipedia definition,⁴ ‘eHealth’ (also written e-health) is a relatively recent term for healthcare practice which is supported by electronic processes and communication. The term is inconsistently used: some would argue it is interchangeable with healthcare informatics and a subset of health informatics, while others employ it in the narrower sense of healthcare practice using the internet. The term can encompass a range of services that are at the interface of medicine/healthcare and information technology.”

Scientific literature addresses seven recurrent topics to be considered in the context of Health 2.0 or Medicine 2.0⁵: patients and consumers, Web 2.0/technology, professionals, social networking, change of healthcare, collaboration and health information of content.

Each eHealth strategy aiming at ensuring its appropriate development and implementation should consider the following aspects: first, all players in the public and private sectors should work coordinately and transversally in the health and technology sectors; moreover, it is important that all stakeholders (healthcare authorities, healthcare professionals, the pharmaceutical industry, scientific professional associations and societies and, undoubtedly, patient associations and the population) play a part in this process from the very beginning; an institutional plan should be in place to guarantee the implementation of the processes and, lastly, every strategy should have a responsible person to monitor all phases of development from the beginning to the evaluation.

Since Morris Collen stated in 1970⁶ that “physicians should enter their medical orders directly into the computer”, eHealth has experienced significant improvement: digitalisation of clinical and administrative documents, access to health information and healthcare support using the internet and the social web, healthcare identification cards, electronic clinical history, electronic prescription, telemedicine services and mHealth services (mobile devices), tHealth (through television) and even uHealth (ubiquitous health). These services can be analysed from different points of view:

From the *innovation* point of view, eHealth facilitates the elimination of barriers among people, institutions and health services, and is changing work processes, increasing the efficacy of information management, strengthening individual and collective knowledge (easier and more rapid introduction, access and retrieval of information), improving communications, interaction and risk management and patient safety by supporting clinical decision-making, ensuring evidence-based decision-making and narrowing the gap

between knowledge and action in public health interventions and policies.

From the *socio-sanitary* (the convergence of social and health services) point of view, applying technology to the healthcare processes can improve patient and population quality of life by more personalised, integrated and seamless healthcare services, and by reducing waiting times and giving better access to professionals, regardless of their physical location.

From the *economic* point of view, it is estimated that the benefits of using the technology will be observed in 3–13 years, but these changes, at least in relation to electronic health records and ePrescribing investments, depending on the size of the project, will probably lead to increased effectiveness, improved commitment for complex decision-making, enhanced rationalisation of available resources and evidence-based prioritisation of needs.

From the point of view of convergence much remains to be done in order to reduce the digital and information gap in a context of technological, cultural, cognitive and generational convergence, and we have posed the following challenges that we regard as opportunities:

- universal access to health services with improved quality of healthcare;
- extension of social services through health systems based on primary healthcare;
- available, competent and motivated health workers;
- real-time reliable sources of information for decision-making;
- knowledge and information sharing within and between dispersed populations;
- follow-up and surveillance systems through mobile and wireless communication devices (eg, expanded programme of immunisation);
- real-time learning objectives for distance learning and training for the development of skills and motivating primary healthcare teams;
- social networking methodologies and tools for disaster and emergency situations;
- access to public health certified and open-access content;
- access to specialised medical care to increase capacity at primary healthcare level
- convergence of electronic health initiatives around the world;
- web-based mobile applications for healthcare management;
- fast technological changes;
- new role of digital governance;
- new models of technical cooperation in the context of ‘national digital agendas’ and ‘electronic administration initiatives’;
- active participation in the International Summit of the Information Society, with focus on health;

- investment in the connectivity of national governments with the support of the development banks;
- increased interest in public–private partnerships.

Strategic and conceptual eHealth model for the Americas and the Caribbean

“This will be the century of networks, connectivity and interdependency, which will make it possible for us to overcome the time and space barriers and open possibilities that were unimaginable to improve the life quality of our people. If we promote these networks to exponentially multiply the available social capital in order to link people and institutions within a large mesh of support and inclusion for all the people of the continent, we will have taken a fundamental step towards eliciting knowledge and experience in new forms of exchanging technical cooperation for sustainable human development.” The words of PAHO/WHO director, Dr Mirta Roses, in her 2003 inaugural speech, already presaged the institution’s eHealth strategy with the aim of establishing a model of institutional governance which would allow the consolidation of a regional vision and the collective introduction of a strategy and a digital agenda in the region.

The PAHO eHealth conceptual model is based on three main components: (1) access to information, (2) access to educational material and (3) interaction management in the Web 2.0 context, which includes the physician–patient relationship and all aspects of telemedicine and telehealth. These components are within the framework of a process which follows a strategic pathway that runs from identified needs to innovative solutions as well as the recording of lessons learnt, which enable the constant improvement of the cooperation model.

The PAHO/WHO eHealth programme acts as the strategic response to the Health Agenda of the Americas⁷ and develops jointly and in coordination with the model started by WHO in the European region, which focuses on:

- obtaining a political and strategic commitment from the countries of the Region of the Americas and the Caribbean;
- building trust and acceptance;
- providing legal and ethical clarity as well as ensuring the protection of clinical personal data;
- working on and developing issues related to interoperability;

- linking eHealth policies with competitiveness, innovation and research policies, as well as with cohesion and social inclusion policies.

PAHO’s eHealth programme will be supported through an eHealth portal (<http://www.paho.org/ict4health>) and will be supported by the organisation technical advisory group in related topics.

The adoption of information and communication technologies will herald improved quality of life of patients and population in the next few years as well as communications between institutions and individuals. PAHO will continue working hard so that health information can be regarded as a public good, and so that its open and equitable access can be considered part of the economic and social development of the countries⁷ in order to comply with the statement of intent established in the Health Agenda for the Americas: “A region where each individual, family, and community has the opportunity to develop to its greatest potential.”⁸

Competing interests None.

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