

Telehealth as a direct health instrument for marginalized populations

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The thematic forums carried out by the network, the patrimony of competences being structured and the interests stated by its members are summarized in this document and are related to the idea that the exchange of the best telehealth and telemedicine practices should be an effective instrument of the universal right to health for remote or isolated communities. It is specially focused on the possibility of performing projects in the Amazon Region.

Institutions of the @-Health of the @ LIS: E-Health Europe - Latin America 2009. Link: EHELAL 2009

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2. University of São Paulo (USP)
3. State University of Amazonas (UNAM)
4. Belo Horizonte City Department of Health
5. Laboratory of Excellence and Innovation in Telehealth
6. Foundation IAVANTE, Department of Health of Andalicia
7. True blue Consultancy and acting on behalf of Sheffield Hallam University
8. Menon
9. Azienda ASL 6 Livorno
10. Fondazione Celli
11. GVC
12. Fraunhofer Society
13. Messina Informática
14. Rute/RNP

PREMISES

The Right to Health for all citizens is the fundamental basis of this proposal and the Duty of Health is the moral link the public policy has towards all citizens regardless of race, gender, social class or geographical location.

The strategic and methodological assumption of this proposal is that Telehealth, recognized as a new technology at the service of citizen health, will reach its maximum value and will have full meaning wherever it becomes a true instrument of social inclusion for the most distant communities such as the case of the last Amazon region.

Several countries from Latin America and specially those whose national frontiers circumscribe the Amazon region (Brazil, Bolivia, Peru, Colombia, Ecuador, Venezuela, Guyana and Suriname) have taken interesting initiatives in the scope of public health focused on the extension of the public health network for indigenous populations. This has also happened through the application of informatics technologies. This set of experiences, however, is not properly shared, it does not adopt the same patterns and does not transfer good practices. Our idea/project would allow the systematization of this wealth.

In everyday life, for example, we usually define the Brazilian experience as Popular or Community. Due to its nature and having to be extended to the poorest and most distant communities from big urban centers, besides having local communities as target, it must be able to rely on low-cost technological models which are sustainable, duplicable, expandable and also effective, at least in terms of the main and most well-known pathologies, traditionally controlled by community health programs. These models have certainly made Brazil a high-end country or even unique in the Latin American context.

EHELAL 2009 carries technological, clinical and sociological competences, the networks of institutional relations and the knowledge of the Amazon reality in order to become the main character in a broad and articulated project of intervention in that sector with the above mentioned finalities.

PAST EXPERIENCES

Projects from the first cycle of @LIS Program

We mention here just some of the significant experiences carried out in the scope of the @LIS-1 projects or those derived from it. We believe it is important to mention

these demonstrative projects as they constitute a valid experimental basis which is not only virtual but also applied to the benefits that informatics technology may uphold to citizens in the health area.

Maybe it would be important to highlight that the health Care Network Project implemented by *Gruppo di Volontariato Civile* was the first one of the @LIS projects in the health area. The acknowledgement of that project is justified by its high level of sustainability and duplicability, two fundamental characteristics to build a true community Telehealth aimed at the most neglected areas.

BHTELEHEALTH

(@LIS 1 HEALTH CARE NETWORK PROJECT)

Created and carried out in the scope of the @LIS 1 Health Care Network Project, this project is one of the first important experiences in Brazil, and specifically the first one in the state of Minas Gerais. BHTelehealth has become an important reference point for the elaboration of the National Telehealth Plan. The Federal University of Minas Gerais from Belo Horizonte, cities of Belo Horizonte, Aracaju, Porto Alegre and Recife, some other Brazilian institutions and Italian, Danish and Finnish partners were involved in the project. In the case of BHTelehealth, it is evidently an urban telehealth program with the objective of reducing unnecessary or useless accesses to health structures in a very extensive metropolitan context such as Belo Horizonte. The initial choice for the metropolitan area was determined by the demand of managing the experimental phase of the softwares and hardwares more easily (with all the problems related to networks, data security, formation of the medical and paramedical staff, etc.) with a technical work group that included UFMG, City of Belo Horizonte and specially Prodabel (the public informatics company that manages all BH networks.)

Telecardio Minas

@LIS 1 HEALTH CARE NETWORK PROJECT

With the Telecardio Minas project co-funded by the Health Care Network Project – @LIS 1 and by the state of Minas Gerais, Telehealth experiences gave an important step towards community telehealth aimed the most remote communities of the state and, therefore, distant from the large public health institutions. This telehealth pro-

gram, originally related only to cardiological pathologies, started with a network of 20 small cities of Minas Gerais, with less than 10.000 inhabitants, in order to be gradually extended to more than 100 distant towns, some of them hundreds of kms away from the capital, Belo Horizonte. The medical support is guaranteed by specialists from the several Medical Schools (*Federal Public University*) of the State of Minas Gerais. This project, as well as the previous ones, became the reference to define a National Telehealth Program in Brazil.

HEALTH FOR EVERYONE

Improvement of the access to assistance and its management through e-learning for the Continuous Professional Development (CPD) of Family Health Teams in Latin America.

Primary and Community or Family assistance are required to develop a function of growing importance in the modern health care system of assistance, both to hold the elevation of health assistance costs and to increase the equity in the health care access. This tendency is common for the majority, if not for all, Western countries and Latin America is not an exception. This is demonstrated by the several programs that are being implemented all over the continent; some examples of such programs are: “Family Health”, introduced by the Brazilian Ministry of Health in 1994; “Family Medicine Program”, promoted by the Chilean government; “Improvement in the Basic Health Insurance”, implemented by the government of Bolivia in 1993.

A preliminary research carried out in Brazil and Chile by the proposers shows a clear and urgent demand for guaranteeing the success of the evidenced improvements, with the objective of improving the health knowledge and the capacity of management of the Family Health Teams that operate both in urban and rural areas, through an initiative of Continuous Professional Development (CPD). HEALTH FOR EVERYONE in Latin America intends to implement in three illustrative locations – Potosí District (Bolivia), Vitória da Conquista in the state of Bahia (Brazil) and the city of Pudahuel in the Santiago region (Chile) – an innovative e-learning environment able to support an effective and accessible way the CPD of the Family Assistance Team that acts in these geographical areas.

CONTEXT CONDITIONS FOR THE SYSTEMATIZATION OF TELEMEDICINE POLICIES IN LATIN AMERICA

Latin American Journal of Telehealth

It is the result of the Health Care Network Project -@LIS 1, created by the desire of Belo Horizonte and UFMG, in collaboration with the Vit@ network, to develop a virtual instrument that would make it feasible to put in a network and, therefore, at the disposal of those involved, the best general Telemedicine and Telehealth experiences carried out in Latin America or in Europe. The initiative was launched in the 1st Workshop of the Laboratory of Excellence and Innovation in Telehealth, Latin America and Europe, in December 2006.

Strengthening of the health sector in Latin America as vector of social cohesion

EUROSociAL is a technical cooperation program of the European Union that intends to contribute to the promotion of social cohesion in Latin America through the strengthening of public policies and the institution's capacity. The main method of work consists of the exchange of experiences between European and Latin American public administrations in five sectors regarded as priority, they are: Administration of justice, education, health, taxation and work.

EUROSociAL Health was provided to a group of institutions of the European Union and Latin America, gathered in Consortium. All of them share the responsibility for the management of set of activities: Institut de Recherche pour le Développement (France, Líder); Fundación para la Cooperación y Salud Internacional Carlos III (Spain); Fondazione Angelo Celli per una Cultura della Salute (Italy); Organización Iberoamericana de la Seguridad Social (International); Fundación ISALUD (Argentina); Escola Nacional de Saúde Pública Sérgio Arouca (Brazil); Fondo Nacional de Salud (Chile); Instituto Nacional de Salud Pública (Mexico).

Since 2007 the project is in charge of @-health with the V THEMATIC AREA: Promotion of health policies in the community for the most vulnerable and excluded sectors, where Thematic Line 1 is developed: Information and Communication Technologies in Health as a vehicle of social integration.

The following are involved in the initiatives carried out up to this moment:

Conveyors: National School of Public Health – ENSP/ FIOCRUZ of Brazil, Health and Consumer Affairs of Spain, Ministry of Health of France (Centro Hospitalar Universitário de Rouen), Italian Committee (Ministry of Health, Toscana regions, Umbria and Emilia-Romagna; Angelo Celli Foundation) and Health Department of Mexico.

Applicants: Ministry of Health of Argentina, Ministry of Health and Sports of Bolivia, Ministry of Health of Brazil, Ministry of Health of Costa Rica, Costa Rican Department of Social Security, Ministry of Health of Chile, Ministry of Social Protection of Colombia, Ministry of Public Health of Ecuador, Health Department of Mexico, Ministry of Health of Panama, Ministry of Public Health and Social Welfare of Paraguay, Institute of Social Security of Paraguay.

PROJECT SYNERGIES

As previously mentioned, UFMG (Brazil) and GVC of Bologna (Italy), with the support of the Health Department, and the involvement of various Brazilian and European partners, have been committed for a long time with demonstrative projects in the community Telemedicine area. Some of these projects have inspired the definition of the current national plan of Telemedicine in Brazil, which will certainly be of great interest to the confrontation suggested further below.

Telemedicina na Amazônia (Telemedicine in the Amazon) (Manaus)

It is another demonstrative Telehealth program for indigenous populations in the Amazon region of São Gabriel da Cachoeira (Manaus) which is in phase of approval for the EU in Country 2009 co-funding line. This third project may certainly be considered the most advanced application of the philosophy and methodology described in the beginning of this document. The elaboration work carried out this year, in collaboration with the Federal Universities of Belo Horizonte, RUTE, São Paulo and Manaus, along with FUNASA (Health Department), the Associations of the Indigenous Communities and the European partners clearly constitute a solid reference basis for any eventual new initiative.

TECHNOLOGICAL SEGMENTS

Search for new technologies

We have reserved a distinct space for the theme of searching for new technologies due to the fact that it is quite different from all the programs previously mentioned and that it deserves special attention concerning the fundamental characteristics of the telehealth we are experimenting in Brazil: Sustainability, expandability and territorial extensibility. Concerning the Amazon context, with its continental dimensions, it is obvious for all of us that technology is the first problem for the application of the Telemedicine network. How is it possible to get to an indigenous community located, for example, 200 or 300 kms or even further from an urban centre, without means of communication except through the plane or boat? It is necessary to have a viable coverage network only via satellite, and it is almost impossible horizontally speaking. Brazil is provided with satellite coverage but not all countries and regions can afford the high costs of this means of communication. Thus, the search for technological innovations in telecommunication becomes really important. That is why the EHELAL 2009 group accepted with great interest the technological innovation developed by the Polytechnic of Turin (Italy), which enables wireless horizontal transmissions for distances of up to 300 km. Our main intention is to provide more information but also to concretely experiment this new technology.

AN IDEA OF AN ILLUSTRATIVE PROJECT FOR PHASE II OF @LIS

The preliminary considerations are not casual. The Brazilian partners and GVC, with their European partners and with the support of the VIT@LIS network are strongly motivated.

The EHELAL 2009 group has been working for over two years through video conferences on the idea of an inter-Amazon program. A program that compares the various experiences in telehealth carried out by several countries of the Amazon region and, therefore, with the same problems and aimed at the same population (*indigenous communities*). Several meetings were carried out this year with important institutions from various interested countries and there was an acquisition work of adequate and efficient competences

in the scope of the network, besides the organization of a preliminary research about the socioeconomic and epidemiological profile of the populations involved in the project.

Thus, through the present document we wish a proposal that could be interesting and that would surely be institutionally, politically and scientifically well sustained.

TELEHEALTH IN THE AMAZON (TESA)

International confrontation of the best practices to build an observatory/incubator and telemedicine nucleus in the Amazon region. (*Brazil, Bolivia, Peru, Colombia, Ecuador, Venezuela, Guyana and Suriname*)

TESA is a project that will build the Observatory/incubator of the best practices in telehealth and will carry out experiences in order to adapt them to the socio-cultural and health profiles of the communities of the Amazon region.

The Observatory/incubator is an intelligent file and at the same time the workshop where best practices are collected and analyzed. The documentation and the study will be useful to project interventions and properly monitor the same. The Observatory/incubator both in its virtual dimension of Website and its events on site will be the place for the communities, researchers and politics to meet and confront the experience will be carried out through the creation of Nucleus of Base Telemedicine and will have direct connection with the Observatory/incubator. The nucleus will be strategically located and functionally identified by the Observatory, to which the empirical information to be treated will be sent.

The original characteristic of TESA is the intersection between the theoretical and empirical dimensions. This provides the project both with a dimension of practical application and of political-strategic consideration.

The **general purpose** of the project is to promote the use of TICS in APS in the Latin American Countries with the objective of improving the access to health services, especially prioritizing the remote and/or underserved areas.

Specific AIMS to reach the general purpose:

- Favor the accessibility of the population to basic APS services through the implementation of basic telehealth services for a specific population.
- Strengthening of the operators for the management of information and promotion of the intersection among actors (Health Centers, Health Bodies, Countries).
- Define a self-sustainable, durable and measurable Pilot Model of Latin American Incubator of health ap-

plied ICTs through established indicators generating high social impact, outlining the political, regulatory, logistic and financial mechanisms by the interested countries that allow the Incubator long-term viability, favoring the entrance of other countries.

- Carry out permanent knowledge, comparison and exchange instruments among the Latin American Countries of the Amazon area and the European countries concerning telehealth experiences in areas with very difficult access and particularly in the Amazon region.
- Experiment with new low-cost and high-efficiency technologies in the transmissions through wireless Internet.

Expected outputs (Deliverables):

- Some telehealth sub-pilots established in Latin America
- Incubator Functioning Regulations (incl. Operational Regulations, Annual Operational Plan, functions, definition of the Technical Committee regarding the functions and positions, etc.)
- Shared methodology for the collection, analysis and diffusion of information
- Portal with the proposed results (Glossary, Knowledge Base, Infrastructure Inventory, etc.)
- Interoperability lines among Centers/ Bodies/ Countries
- Experimentation of new technologies
- Final report of assessment, sustainability, reproducibility.

The immediate expected **impact** is shown in three levels:

- **MACRO LEVEL:** Improvement, in all involved countries, of public policies, institutional practices and national management mechanisms to strengthen basic health services through the production and sharing of information and useful indicators for the decision making process and the accomplishment of public policies regarding ICTs incorporation in APS.
- **MEDIUM LEVEL:** Strengthening of the Regulatory Framework for future projects and definition of Standards for the interaction among Health Centers/ Bodies/ Countries (TPP-LA)
- **MICRO LEVEL:** Improvement of the access to health services of an excluded population through the implementation of Health services in Countries of Latin America.

Replicability of the project

It is divided in three directions:

1. gradual expansion of the experience carried out through the implementation of the telehealth clusters;
2. future inclusion of new partners (the Incubator should be open and actively look for new partners);
3. inclusion of new areas of action (the Incubator is open to new thematic areas of health applied ICT.)

The Project (both in terms of the incubator activities and the pilot actions) will be managed in three levels:

- Strategic level, by a Technical Committee;
- Operational level, by a Secretariat;
- Local level, by a basic telehealth clusters coordinator in every country.

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