

SCIENTIFIC ELECTRONIC PUBLISHING IN CUBA: A CHALLENGE THAT TURNED INTO A WIN

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In 1992 Cuba was in its worst financial and economical crisis, which made it impossible to provide all Cuban hospitals and clinics even with international specialty journals. As an alternative it was decided to explore the possibilities electronic publishing could provide to alleviate this tough situation. As a response Infomed was born (<http://www.sld.cu>).

Infomed is the national telematic network of the Public Health System in Cuba, based on a human knowledge network for health improvement. Its mission is to promote the high quality health care, education, research, and management by using the best available technologies. Moreover, Infomed integrates the Cuban Public Health System with the global network of health information.

The action plan was to set up an integrated network of accessible health information in Cuba, based on new information technologies; to interconnect the most important Cuban health institutions and to connect them with Internet; to develop added value services in public health; and to integrate the Cuban public health experiences and results with the global electronic networks.

What has been achieved? A nationwide network has been set up with regional and provincial nodes to expand the services throughout the country. It is connected to the most important networks in Cuba and to the Internet and a network with important information services available to any health care worker and institution with access to a computer and an account. Cuban Health Institutions continue developing their own information resources.

However, the benefits have expanded beyond the infrastructure. The national capacity to manage new information technologies has expanded among health professionals and Cuba has a network of scientific information professionals that are working in different national and international projects.

The network is based on regional and provincial nodes located at the provincial medicine schools. It has promoted and facilitated network access to many users, giving preference to institutional accounts. In each node there is a supervisor for guiding others through the initial steps and who assists the health personnel. There are often workshops and short courses. There is also public access to the network. Many persons who do not have a computer or a connection may access the network using the "points of presence" of Infomed in every locality (municipalities) of the country. There are also computer laboratories connected to intranets with public access and services including permanent courses.

All services are available via WWW and/or e-mail, including access to all Cuban health journals and much of the international scientific literature. All users have access to NLM (Medline) and to other important web sites. There are hundreds of discussion groups and bulletins, forums and chats. Classic Internet tools applied to specific health information services (e.g. daily news, weekly bulletins, Cuban health statistics, etc). Subscribers are not charged for the services provided by or through INFOMED. The services available through the www do not require registration or a password.

The services model has been based on www as integrator system for all applications and TCP-IP networks. Infomed has developed its own applications to solve specific problems using international standards. The strategic components of the project are: a virtual library, a virtual university, a telemedicine service, a health surveillance network, and a health management network.

In few years Infomed turned into the world's first health network to provide a nationwide coverage, reaching all of the 256 municipalities all over the country and it continues growing. Infomed provides all kind of traditional services (e.g., mail, news, scientific literature, virtual conferences, and some support services) and it serves as the national focal point for the Health Virtual Library and the Health Virtual University. The benefits of this project have by a long way surpassed its costs and they made it possible to achieve some goals that would simply never be met by the traditional print-based approach.

Two years ago, Infomed won the Stockholm Challenge Award (http://www.challenge.stockholm.se/new_tavlande_index.html) for its effective inputs in improving health at a low cost and for its advances in creating an effective network that helped in narrowing the knowledge gap between Cuban physicians and scientists and their colleagues in all over the world.

Infomed has emerged under conditions which are not uncommon in the developing world. It has been a concrete application to solve a real problem with new technologies and it has turned into a crucial component of a national strategy oriented to promote health as an essential investment for development.

INFOMED constitutes conclusive evidence that it is not only possible, but also imperative to create health information networks in the developing world.