Hospital web pages – a Brasov case study

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Abstract: Although medicine has been a long time considered as a profession purely based on direct inter-human communication, in recent times it has become increasingly obvious that the use of IT and electronic communication in particular provides not only economic efficiency of activities in medical field, but also a way of providing remote communication between medical staff and patients or carers. Electronic communication raises ethical problems, induced by e-communication that reduces time and space, but equally may create problems related to confidentiality issues and other ethical dilemmas. More and more private or public hospitals, medical centres or individual medical practices including Romanian ones use the Internet as a communication tool, both for presenting the health facility and assessing patient satisfaction or for increasing the quality of management of concerned units. In our paper we are presenting the results of a study on the Brasov hospitals’ web pages, their structure, attendance, information quality, conformation with ethical rules.

Key Words: hospital web-pages, e-communication, public health

1. Introduction

Development of e-Health is a constant concern of the last decades.

As stated by G. Mihalaș and O. Purcărea: „The topic updating the healthcare information strategy turned out to become last decade a permanent topic for discussions at highest levels among healthcare decidents, and even more.” [4]

Health system development, changes in the demographic structure of the population and especially the desire of patients and carers to benefit from the latest achievements of science and technology have induced, at least in Romania, a translation from primary care offices, to hospitals, especially to private establishments.

Development of private healthcare system, competition that has emerged also in this area has created the need those more and more healthcare facilities for inpatient treatment to develop their own web sites.

As stated by professor Sicurello: „Many hospitals, clinics and other health institutions around the world use computer systems routinely and store their medical record and databases electronically”. [8]

Web pages have multiple uses, as shown in the following figure:

The technology is currently used in various ways in medicine; IT technology has succeeded not only in modifying human behaviour, including in this area, but also in facilitating the development of new professions, like computer scientists specialized in software development in health, communication included.

The internet is used more and more even between medical staff and potential clients, or between hospital manager and hospital staff.

2. Medicine and IT

Using the Internet in curative activities has become a reality of the latest years, and telemedicine or the virtual hospital has passed the stage from science fiction to reality.
The Internet use can have a beneficial effect, ten priorities being set by international organizations in this field. (Fig.2)

![Fig.2 – Priorities in e-Europe](image)

Two international organizations, European Commission DG Information Society and Media and European Federation for Medical Informatics have developed a series of programs for facilitating access to healthcare system.

In Europe even a new strategy has been developed this year, Digital Agenda, following the one named i2010, in order to improve the state of the economy, to ensure society development, but also to increase the quality of life of every citizen of our continent.

As is was mentioned by Europe’s information society: “at EU level, the introduction of eHealth services is facilitating access to healthcare, whatever the geographical location, thanks to innovative telemedicine and personal health systems. eHealth is also breaking down barriers, enabling health service providers (public authorities, hospitals) from different Member States to work more closely together.” [9]

Using the Internet will ensure the restructuring of resources, the appropriate using of existing ones, patient education, and also, even continuing education of medical staff.

3. Challenge in developing hospital web pages

Development of information society, the increasing number people having access to a computer, even the elderly (including the development of introductory courses in computer for them), the diversification of information and the need to interact as rapidly as possible determined medical units to adapt their means of information transmission, to make them more attractive, easier to run and use.

There are several arguments in favour of the use of websites for this purpose:

- ability to address a large number of people
- wide accessibility (if in 2000 only 3.6% of the Romanian population had access to a computer, in 2007 the percentage was already 23.9%)
- more and more people use the Internet to obtain information, and not only to communicate via e-mail, messenger or other means

As Rogozea et all show: “The Internet visibly increases the communication speed and contributes to time and space barriers’ disappearing. Also there is an increasing of information amount and accessibility but unfortunately there is no selection of information.” [7]

One of the major problems raised by the use of the Internet as a source of information is related to the quality or information which patients and carers can get; posting information on a hospital website provides certainty that the information is reliable and has the endorsement of professionals in the field, providing both information dissemination and the development of a global market for health services. [2]

As mentioned by J. Claude Healy “e-Health is the instrument for productivity gains in the contest of existing Healthcare systems but also provides the backbone for the future citizen centred healthcare environment” (J. Claude Healy –WHO September 2004). [8]

Developing systems with guaranteed information quality should be an ongoing concern for public health specialists, who should work together with IT specialists and design their own an open source web browser. [5]

4. Brasov hospital web page

As Eysenbach and Diepgen mentioned “The quality of information on the internet is extremely variable, limiting its use as a serious information source” [3]

It is well known that “The internet offers high speed communication and up to the second information it operates in a cheap, user friendly medium. Access is potentially universal, notwithstanding the digital field, divided between developed and developing countries because of a lack of hardware and telephone lines”. [1]

Development of transparent solutions both in hospitals management and in assessing customer satisfaction or medical staff members satisfaction, provide not only modification of human behavior, but also the possibility of evaluate these changes. [4]

Public health professionals must also ensure the assessment of these forms of communication, in order to increase their quality.

As it was specified by Eysenbach and Diepgen: “For quality to be evaluated, these needs have to be defined and translated into a set of quantitatively or qualitatively stated requirements for the characteristics
of an entity that reflect the stated and implied needs. So how can we define consumers’ “needs” in the case of medical information on the internet?" [3]

In order to evaluate the Web pages of Brasov hospitals, a set of criteria to be followed in all of these structures should be established. The issues to be considered are:

a. form of the website
   o general aspect/look
   o color harmony

b. content of the website
   o information quality
   o interactivity
   o conformation to ethical rules

Regarding content, this could be divided into:

a. compulsory elements
   o contact data

b. optional elements
   o data on hospital history
   o forum
   o hospital development projects
   o announcement of job opportunities
   o photo gallery
   o the map to facilitate the hospital's geographical position
   o online appointments
Starting from these criteria and analyzing the main characteristics of Brasov hospitals' web pages, we found that:

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Table no.1 – characteristics of Brasov hospitals' web pages

CEH = County Emergency Hospital,
OG = Obstetrics- Gynaecology Hospital,
CH = Children’s Hospital,
NPH = Neuropsychiatry hospital,
RH = Railway Hospital

All web pages of hospitals in Brasov contain information of public interest, information for patients, but unfortunately none of them includes information for healthcare professionals.

In none of the hospitals' web-pages the possibility of online programming consultations, which would facilitate clinical management in the Ambulatory area, was provided.

Another issue which would necessitate a more complex approach is that of informed consent; the issue of informed consent would necessitate developing of a special dedicated web page.

Most of analyzed websites have a friendly interface, ensuring good communication and quick access to information, and the information is accurate and well structured.

Differences among the analyzed hospital web pages have been depicted in sections on patient satisfaction; some hospitals (Obstetrics- Gynaecology Hospital, Railway Hospital) have implemented even a questionnaire that can collect information and can provide good feedback on the quality of services.

Fig. 8 – Brasov County Emergency Hospital - patient satisfaction questionnaire

Unfortunately the ethical rules are not always followed, for example one of the hospitals (Railways Hospital) require the patients to give their data when completing the questionnaire on patient satisfaction; the right to confidentiality is, though, not guaranteed.

5. Conclusion

Improvement of hospitals' web-sites should be a focus of public health and informatics specialists in Brasov.

Websites of hospitals must not only ensure compliance with ethical rules, be functional and professionals, as far as informatics is concerned, but also provide adequate information to potential clients of medical units [7]. Websites are not just a communication tool, but also a friendly IT tool for better management of these structures.

Computer scientists developing such websites must
work together not only with their client (board of hospital), but also with public health specialists.

References:


