

Website for patient – in the service of hospitals: Content analysis, needs and characterizations in Israel, North

America and UK/

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Abstract

The purpose of this research is to examine the connection between the organizational structures of general hospitals to the information represented in their websites and to explore which of the hospitals strategies are best served by the site. For the purpose of this research websites from four different countries were chosen: The United States, Canada, Great Britain and Israel.

The Literature Survey discusses four relevant issues:

1. The structure of the health system in the four countries.
2. Information technology and its influence.
3. Medical consumerism – its development and influence.
4. Qualitative evaluation of medical databases on the internet.

Since the 1980's health care systems are in a state of economic and functional hardship in almost all the countries of the western world. The main problem they face is how to provide good service in a reasonable price. The main factors that contribute to the increased monetary spending are accelerated technological development and mounting aging population. First, the health care systems in each country are presented and the way each country chose to cope with the above-mentioned crisis.

The health care system in the United States is mostly private. It is based on a great number of providers, insurance companies and organizations. On 1993, President Bill Clinton initiated a reform in the system, but to this day about 15% of the citizens are not covered by any kind of medical insurance, and the United States rates first country in the world regarding medical expenditure per capita.

In Canada the health system is public. The State is responsible for the insurance and its agents are district health programs. The citizen does not pay for medical services (inc. preventive medicine) and is not restricted in consumption. Since the 1890 there has been deterioration in the quality of medical care because of the increased costs. Today there is a growing demand to open private health services in order to cope with the problems, but it encounters severe objections from Doctor's unions that support public health systems.

In England the public health system underwent several significant reforms – the last of which from the 90's, included a separation between the organization that buy a certain medical service to those who provide it, in order to create an "inner market" for medical services. The reforms improved the systems in the non-clinical aspects like shorter waiting lists but the quality of clinical treatment was not significantly improved and the citizens were even constricted in terms of choices and decisions because of contractual agreements.

In Israel, the researches Harrison and Shalom differentiated between three environments that influence the hospital:

1. The general environment (technological development, demographic changes, recession, consumerism and information technology)
2. The institutional-national environment (national health insurance bill, government actions in the 90's)
3. Local environment (survival strategy of the medical Care providers that reduced payments to the hospitals)

The researchers presented three survival strategies used by general hospitals:

1. Institutional strategy based on accepting legitimacy from institutional and societal networks
2. Cutting costs and increasing efficiency
3. Business management in order to increase income.

On 1996 a legislation concerning patient rights passed that insured certain rights to patients regarding consent and knowledge of procedures.

Following, the influence of information technology on the medicine world is presented. The Internet is very popular as a source of medical information because of its availability, speed and the updated extensive information it provides. The term that defines the websites dealing with health and medicine is CYBERMEDICINE. Many polls and surveys are taken between the web-surfers from which it is evident that information on the web has a great affect regarding medical decisions, and that there are many problems resulting from cyber-medicine since the net is open to hackers and charlatans.

In addition, the factors that contribute to the development of medical information sites are part of the world medical consumerism. Two important terms in that regard are consumer health information, and patient education. The two overlap in their ability to change patient behavior following acceptance of medical information. The reasons for the growing awareness for the need for medical information are:

1. *Society* – growing information following 2nd world war and the rise of consumerism in the United States in the 1960's
2. *Psychological need* of the consumers to identify and treat ailments
3. *Economic factor* – the cost of health care burdened the consumer following the reforms, which in turn increased the need for information in order to make a decision.

Public libraries became more and more involved in providing medical information to consumers and medical information centers were established in the beginning of the 1980's, the first was "Planetree" in San Francisco. In Israel there are seven medical information centers.

One of the problems with the web is that anyone can post false information. It is difficult to evaluate the credibility of published information.

There are several methods to determine the quality of medical websites:

1. Evaluation by the search engines that include those sites
2. Evaluation by a content-sorting software, specific for a certain category
3. Bibliometrical evaluation based on the amount of links in the site
4. The presence of an official Logo
5. Personal evaluation by the user following different criteria

Many researchers chose different criteria for evaluation. Kin and his colleagues found that the most common criteria relate to content, design and esthetical value of the website; full details of the writers, developers and financers, how updated the information is, authority, ease of use and availability.

This research is qualitative, based on analysis of content and form of general hospitals websites as well as an interview with decision makers from the hospitals that are in charge of website policy.

The research questions are:

1. What are the content and form characteristics information websites for patients in the United States, Canada, Great Britain and Israel?
2. What is the predominant model of the site: image, link, integrative?
3. Is there a connection between structural aspects of the hospital, like size and ownership, to the model of the website and its content?
4. What are the hospitals strategies served by the website?

In the first stage of the research four hospital websites from each country were chosen, according to the definitions that were set. On the second stage six hospitals in Israel were chosen according to categories of ownership and location, four of which have a website. In order to classify the websites an upgraded model of sites was constructed. An image model is the most basic in regard to the representation of information. An upgrade of the image model is a model that has a link system to leading sites on medical fields. An upgrade to the link model is the integrative model. In addition to links it will provide professional support to the patients, given by the hospitals experts via forums, chat, Q&A etc. in the third stage, the people who are responsible for the content of the hospital's website were interviewed. Two tools were constructed for the purpose of this research: a questionnaire for analysis of content and design and an interview.

Based on the finding of the research, we can say that there is a correlation between the structural organization of the hospital to the represented information in the United State and Israel. A weaker correlation was found in Canada and Britain. In Canada there was no difference between the represented information of different hospitals. The organizational structure of the hospital had small influence on the website. In

contrast, in the United States where a stronger correlation was found, we can assume that a general central hospital's website will give the widest array of services and content. In private hospitals there is greater stress on administrative information. In Israel there was a strong link between the organizational structure and the represented information. The website expresses a process of forming a unique identity. The governmental public hospitals are in a state of ever increasing privatization process and possess wider autonomy, thus they spend more money on the development of their websites. Those sites are planned to be more comprehensive. On the other hand the Hospitals that belong to Kupat Cholim (Medical Care provider) have little autonomy and their imbued identity is that of their owner, that dictates the content and form of the website. Their sites are very rudimentary. A website of a hospital managed by an NGO will reflect the different identity by placing more stress on inter-organization connection and the connection with contributors abroad. A site of a private hospital reflects a business outlook where doctors are another target audience. That site could not be classified according to the aforementioned models.

In addition the interviews in the hospitals in Israel revealed a strong connection between the websites and the survival strategy that the hospital chose. In governmental hospitals, where the institutional strategy predominates the sites are wide, inclusive and present the reputation of the hospital in order to strengthen the legitimacy given by societal networks. The hospitals that belong to "General Health Care", where a strategy of efficiency and budgetary restriction rules, spend very little on their websites. In a hospital of an NGO the donor relation's aspect is very important and the site is used for that purpose – an English language site. In a private hospital the leading strategy is business and the site reflects that, it includes tools that will replace existing procedures in the aim of improving processes and save money.

We can see a connection between the models for the classification of sites and the health care systems in the United States Canada and Israel. For example: in the United States where the private market is developed and there's great competition the sites include many information service and therefore most belong to the Link and Integrative models. In Canada, on the other hand, where the system is National-public, most sites are in the basic image model.

Finally, it seems that hospital's websites have an important role as a reliable source of medical information in the world of CYBERMEDICINE. Hospitals have an interest to provide correct medical information as part of their defense against malpractice sue.

In order to build a serious, reliable site, that belongs to the integrative or link model, there is a need for a new model. In this model the information person is the central pivot of the site, who coordinates between professional experts, understanding of the net and knowledge of the patients.

The research leads to the conclusion that it would be beneficial to consider to include medical aspects in the information studies departments in the academy in order to train personnel for that role. It is important to raise awareness among hospital managers to this new emerging profession and to introduce training programs regarding the Internet and medical information databases to people working in libraries today.

Many other question for future discussions remain open: how to explain the very basic site in Britain, in a market of private medical care, what will be the content in an patient information site etc.

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