Evaluation of the Internet-based resources on clubfoot

SMARANDA COSMA*, DAN COSMA **, DANA VASILESCU**, MADALINA VALEANU ***, GRIGOR MOLDOVAN****, ADINA NEGRUSA*

*Business Department, Faculty of Business
**Department of Pediatric Surgery and Orthopedics
***Department of Medical Informatics and Biostatistics
****Department of Computer Science

*,**** University of Medicine and Pharmacy “Iuliu Hațieganu” Cluj-Napoca
**,** University of Medicine and Pharmacy Cluj-Napoca

{smaranda, anegrusa}@tbs.ubbcluj.ro, http://www.tbs.ubbcluj.ro
{dcosma, mvaleanu, dana.vasilescu}@umfcluj.ro, http://www.umfcluj.ro
moldovan@cs.ubbcluj.ro, http://www.cs.ubbcluj.ro

Abstract: - The Internet can be an alternative information source for the parents of the children exhibiting relatively uncommon diseases. The implementation of a medically authorised integrated information system is a need for the medical system in Romania. Parents make use of this system as a guide for the pathologic entity their children suffer of and a basis for the consultation of their children. In the context of the wealth of data to be found on the Internet, academic sites should be encouraged to supply guides and good, trustful information to the parents of the children.

Key-Words: - clubfoot, Internet, medical communication, resources

1 Introduction

The individual health forms the basis of the concept of public health. Public health refers to the set of information, skills and attitudes of the population that are focused towards the preservation and improving of health, with a stress upon the social factors that are involved in the preservation of health. The aim of public health lies in entraining the members of a community in the action of preserving and promoting a healthy environment, the main objective being the prophylaxis of sickening [4].

Nowadays the healthcare system from every country have to face to many challenges of the 21st century which influenced significant the financial aspects of the organizations’ activities. In these new conditions the competitions increased and pressed on the costs to acquire and maintain a high quality of the technology and capital outlay.

Today’s changes in the healthcare systems are calling all healthcare providers to realize the importance of marketing, bringing about a “renewed emphasis on research, measurement, planning, analysis, forecasting, targeting, segmentation, and strategy” [15].

An important change into the market that affects the entire healthcare system was the transformation of the patient into a consumer. As patients, people were submissive. They went to the doctors their healthcare plan dictated, followed only the instructions of their physician, and went to specialists and hospitals designated by their physician and/or health plan. But as consumers, people play a much more active role in their healthcare. They stop and compare health plans, research symptoms and diagnoses, and are sensitive to direct and indirect costs [15].

Due to the very large resources provided by the Internet, the patients are better informed and more involved in the making decisions concerning their state of health [9]. In the United States of America, 73 million people are said to use the Internet to get informed on topics related to health. Their decision-making process related to methods of diagnosis and care chosen is affected by the satisfactory information found. It is for this reason that the Internet is seen as the most powerful source of information available for the patient [12].

Internet-based informational resources should be considered by the healthcare providers for applying new strategies for improving the healthcare services quality and satisfying the patients’ need. As Thomas explained, healthcare consumers “want the
outcomes of the healthcare system as patients and the benefits incurred by customers” [15]. They “expect to receive adequate information, demand to participate in healthcare decisions that directly affect them, and insist that the healthcare they receive be of the highest possible quality.” They also “want to receive their healthcare close to their homes, with minimal disruption to their family life and work schedules,” all while maximizing the value and minimizing the cost.

Due to the very large resources provided by the Internet, the patients are better informed and more involved in the making decisions concerning their state of health. In the United States of America, 73 million people are said to use the Internet to get informed on topics related to health. Their decision-making process related to methods of diagnosis and care chosen is affected by the satisfactory information found. It is for this reason that the Internet is seen as the most powerful source of information available for the patient [18].

2 Material and method

The Internet-based clubfoot resources address to the parents of the children diagnosed with congenital idiopathic clubfoot.

We investigated the availability and quality of the sites found on the Internet. The term of „picior strâmb” (clubfoot) was chosen as we found that only this part was usually memorised by parents and this phrase was connected to their desire of finding more data, as it was shown by our analysis of the complete treatment established by the treating doctor. We have reproduced the parents’ behaviour that usually access the Internet, introduce „picior strâmb” in the most often-used search engine: Google.ro, once they possess the diagnosis.

The results of the search have been analysed from many viewpoints: authors, page content and worth of the data. The authors of the sites have been divided into the following categories: academic institutions, doctors’ personal sites, discussion forums, commercial pages and others. The page content and the worth of the information have been analysed in view of the aspects related to aetiology, clinical manifestations, and types of conservative and surgical treatment.

Then a multimedia material was made to create and integrate various types of media: images, pictures, diagrams, text, and data for information on the congenital clubfoot. This material was produced in HTML hypertext language with the help of the application AceHTML and was published on The Internet at the address http://piciorstramb.bravehost.com.

3. Results

This study has evaluated the data found in Romanian on the Internet on congenital idiopathic clubfoot. Searching for the term „picior strâmb” with the engine Google.ro gave 19 results. All the sites have been assessed separately with the criteria established at the beginning of our study.

Table 1 shows the authors distribution web pages. The authors who could not be categorised have been included in the chapter „Other authors”.

<table>
<thead>
<tr>
<th>Web page authors</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic institutions</td>
<td>4</td>
</tr>
<tr>
<td>Personal pages</td>
<td>0</td>
</tr>
<tr>
<td>Discussion forums</td>
<td>5</td>
</tr>
<tr>
<td>Commercial pages</td>
<td>5</td>
</tr>
<tr>
<td>Other authors</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
</tr>
</tbody>
</table>

It is found that the majority of the data found on the Internet on clubfoot originate in the discussion forums and companies working for medical purposes, academic institutions being less in charge with the dissemination of the authorised medical information.

From these pages it has been evident that no site contained information on the aetiology, clinical manifestations and treatment of clubfoot. This aspect and the idea that most information originate in medically non-authorised sources led to the conclusion that, the data on the Internet concerning clubfoot are extremely scarce, almost non-existing.

Consequently, we have produced an informative material in the HTML language, made available at the address http://piciorstramb.bravehost.com. This material presents the most useful data on the congenital idiopathic clubfoot.

The first page is called „Definition” and contains a brief description of the deformity which is illustrated with photos from the author’s own archive. (Figure 1)

The use of the menu on the left hand of the page enables the user to reach the following page: „Therapeutic options”, which present the available conservative treatment and the surgery for the congenital idiopathic clubfoot, with specific indications and counter indications. (Figure 2)
Discussions

With the extension of the communication means offered by the Internet, the patients have become more aware of their problems and expect a more active involvement in the decision making process related to the management of their diseases. Though many organisations control the data level provided on the Internet, the World Wide Web (WWW) provides so many options that it is practically impossible to make the quality assessment for each case. [12,13] Therefore, patients can be really misinformed before getting to the doctor. [14]

In an article published by Aslam in 2005 [1], it is appreciated that the Internet has both qualitative and quantitative limits. British parents are more critical in so far the information spread on the Internet are...
concerned and only 65% recommend the Internet as an information source as compared to 90% of the American parents. The authors of the research find a general positive attitude versus the Internet, but consider that the visit to the doctor and direct consultation must not be avoided and substituted by the reading on the Internet. Parents find the Internet data easy to reach and too large sized, on the other hand. The British authors found that 53% of the parents saw as useful the information found as they helped them understand the medical consultation, and 26% of them asked questions based on the data found on the Internet [3, 19]. The more informed parents are on the disease of their child, the longer the consultation time [10, 11, 20]. Parents want an active involvement in the care supplied to their children.

The reading of the web pages in Romanian on the congenital idiopathic clubfoot has shown that medically approved pages do not exist. Hence, an empirical approach of the parents related to the consultation and treatment of clubfoot, as the parents do not possess the information that could help them make the best decision for the deformity of their child [5, 6, 7, 17].

This took us to the production of the multimedia material on clubfoot, published on the Internet at http://piciorstramb.bravehost.com. We think that this material diminishes the lack of information for this quite frequent congenital malformation. The site for informing parents on clubfoot provides an information source that could enable them make a decision on the treatment of their children’s deformity [2, 16]. The number of votes (533 in two months) demonstrates the fact that such a resource has long been expected, as data on clubfoot are still very scarce.

The model presented above offers the opportunity for improving the health care system from the economical point of view:

- it is effective for the doctors and for health related staff, especially for the general practitioners; they can access all the needed information about clubfoot;
- it is efficient for the patient; they will be better informed for preserving and promoting a health environment;
- an important contribution from the marketing point of view is the identification of the different types of demand (target markets); knowing the needs of the potential market segments it is possible to specialize the medical centres on specific fields/categories.

The increasing need for health care education of the population and the increasing competition in the field of medical services in Romania are the premises for introducing a marketing-based orientation in the medical institutions in our country [8]. First, it has an educational role as both the fulfilling of the demand manifested and the creation of that demand are aimed at. From this point of view, private and state-owned institutions behave differently. The former are more receptive to accept marketing for improving their activity. The latter, still used to act under the protection of the centralised thinking, admit at slower pace to accept and use health care marketing.

5 Conclusions

The would-be integration of such informative sources in a single national system, of the National Register-type, will improve the quality of the data available for the researchers in Romania and the outcomes of the studies carried out will generate the basis of uniform treatment protocols, to be made available for all the medical centres in Romania so that the quality level of the medical act will be standardised and improved.

The Internet can be an alternative information source for the parents of the children exhibiting relatively uncommon diseases. In general, we have found that the quality of the information is relatively scarce and poor. The results of the search are affected by the strategy of search, level of knowledge and education of the parents, and familiarity to the use of Internet. The implementation of a medically authorised integrated information system is a need for the medical system in Romania. The creation of such a system for the orthopaedic congenital malformation (clubfoot) has proven to be a singular action in Romania, as it supplies a research basis for this pathology and an information basis for the parents and children. Parents make use of this site as a guide for the pathologic entity their children suffer of and a basis for the consultation of their children.

In the context of the wealth of data to be found on the Internet, academic sites should be encouraged to supply guides and good, trustful information to the parents of the children.

References:


