I n the past 20 years, new health concepts have emerged, which trends are to bring medical knowledge closer to patients understanding. This involves patient participation in the decision-making process, raising an old concept - information asymmetry, and some other new concepts: informed decision, empowering patients, patient centred system.

The idea of having a patient who knows as much about health and disease, is not new. It appeared in the XVIII century to Benjamin Rush, a physician in the United States, influenced by Enlightenment era, whose recommendations were that doctors must share information as much as possible with their patients, and that they have to educate patients and to respect the decision of a patient who knows his or her disease, to accept or not the therapy [1].

Doctor-patient relationship, communication between them, patient participation in decision making and in his own healthcare, are constantly debated topics over time.

In October 2013, the British Medical Journal, in an article by Ray Moynihan, approached the idea of citizen participation in the decision making. In the article "The future of medicine lies in truly shared decision making", the author talks about the concept of "shared decision making", making reference to the balance of power and to roles in doctor-patient relationship. There is a new type of doctor-patient relationship, in which the two actors behave like partners; the relationship is based on equality, disappearing the idea of patient paternalistic one to a partnership one.

In order to guide patients and consumers to trusted sites, many organizations have developed tools and standards for the evaluation of site contents. The best known example is Health On the Net Foundation.

In order to see where medical sites stand in the Romanian Internet users’ preferences, I analyzed how often these sites are accessed, by tracking the number of visits on the site. Romanians preferences for health information sites are turning, by far, to the website: www.sfatulmedicului.ro. Interest in medical sites is revealed by the fact that from 25,231 general sites visited by users in December 2013, the cumulative number of visits, ranked www.sfatulmedicului.ro 14th overall.

In Romania, as in the rest of the world, Internet users are beginning to be interested in medical information, to accumulate that information, in order to either discuss them in forums and virtual spaces for patients or with their doctors, making shared medical decisions, changing the doctor-patient relationship from a paternalistic one in to a partnership one.

Keywords: medical websites, doctor-patient partnership, site assessment, site visits

E-patient generation

Health care information is more increasingly offered on Internet websites, where users find a wide range of medical information. Due to the multitude of medical sites, an Internet user finds it difficult to tell if a website contains reliable information or not.

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E-patient generation

Health care information is more increasingly offered on Internet websites, where users find a wide range of information, from how to maintain good body condition, to information about diseases, diagnoses and treatments.

In the last 10-15 years, the number of patients who use the Internet for medical knowledge has experienced explosive growth and this trend can also be seen on Romanian domains (.ro). For example, the number of visits on www.sfatulmedicului.ro tripled over the last four years [3]. This new generation of patients, with Internet browsing knowledge and desire to know as much information about disease and health maintaining, was called " e-patient generation".

"E-patient" is a consumer of health services, who participates fully in healthcare. Sometimes referred to as a " Internet patient", e-patients are seen as equal partners with their physicians in the healthcare process. E-patients gather information on personal medical conditions and on their families’, using electronic communication tools (including Web tools) to cope with medical conditions [4].

"E" can be provided by “electronics”, but can also originate from [5]:

- (Equipped) - equipped with skills to manage their own health,
- (Enabled) - Ability to make choices about self-care and adherence to these choices,
- (Empowered) - Take control
- (Engaged) - The patient is involved in his or her own healthcare,
- (Equals) - Equal role in partnerships with different doctors involved in his or her care,
- (Emancipated)
- (Expert) Expert patient who can improve his or her health through self-assessment, copes better with fatigue and other symptoms of chronic diseases and reduce reliance on hospital care.

E-patients have online communities where they meet, discuss, offer each other support, inform and instruct one another, thus increasing their power of influence [6].

However, they provide for healthcare professionals a rich and still unexplored educational resource, through participation or management of sites like healthunlocked.com, healthtalkonline, rawarrior.com and cancergrace.org [7] - →
the disjunction between the topics discussed in clinics and those addressed by patients when they are talking among themselves. In Romania, such resources are sites that include patient forums, among the best known being: SfatulMedicalului.ro, MediPedia.ro, DoctorulZilei.ro.

**Partnership with patients**

Doctors and patients should work together for a better quality of care and to change entrenched practices and attitudes, which is not easy for either party: doctor must abandon the prejudice that say "only the doctor knows what is best" and patients must take an active role in their own health care. In the world, things began to change, meaning that patients and doctors work together, such as, for example, on identifying and restricting unsecured and inefficient interventions, as does the organization "Choosing Wisely" in the U.S. [11].

Discussion groups composed of patients, caregivers and clinicians, led by "James Lind Alliance" in Britain and by "Patient Centered Outcomes Research Institute" in the U.S.A., highlight the discrepancy between questions that patients and clinicians want answered, on the one hand, and that investigated by researchers, on the other hand. Discussions together helped in building a database regarding uncertainties related to the effects of treatment [9].

Patients and doctors collaborate and create new services and information systems. Among the leaders of this partnership is ReshapeHealth organization (www.radboudreshapecenter.com) that promotes the first research process conducted by patients and funded by "public".

An increasing number of medical organizations provide patients’ access to their own medical records, and, in some cases, even the control of them. At Mayo Clinic, patients have the opportunity, through a free feature, to see the full medical records, pathological and radiological reports, and, because the change of power pole depends on a common language, they currently work on restricting medical jargon in such resources [10].

In Romania, electronic health records are expected to be accessed by the patient and his or her current doctor during the year 2014.

The world's advocacy in favor of collaboration with patients is supported largely by the belief, based on some evidence, that their involvement will reduce health costs by avoiding unnecessary investigations and treatments. Partnership with the patient is seen as a way to support the sustainability capacity of health systems and even formulated the view that this is the "drug-bomb of the century" [11].

**Objectives of the sites with information for patients**

Information for patients and consumers represent a domain which extended from specific patients’ information needs till providing broader health information to ordinary people, who may not have health problems.

While the Internet offers a wealth of information on an extremely large number of topics related to health, medical area and the extent of the information available may be hard to grasp, at best, and confusing, misleading, at worst case. Even in the case of some reliable medical sites (eg Romedic.ro, PacientBun.ro, DoctorBun.ro), Internet users can remain with false information and opinions, that physicians find difficult to clarify them, sometimes only after further investigation. Web information that bring a base for decisions, have effects on knowledge, attitude and behavior, important components of informed decision making process.

Put together, the stated objectives of the medical sites are mostly related on information transmitted to patients, as much medical and maintaining health as administrative information; related to document content and language used; about making shared decisions between clinicians and patients; about the presentation of tools and practices which support informed decision; about the creation of virtual spaces for dialogue; about certification online quality information by developing tools to assess sites, etc. Roughly, they are:

- providing information to patients about various diseases and treatment options,
- providing information to patients about medication, drug interactions and drug interactions with food,
- providing information to patients about tests and medical investigations,
- increased accessibility and dissemination of information,
- development of basic principles regarding quality information for patients,
- development of public-private partnerships to examine and to find new ways to improve the quality of information for patients,
- solving problems related to the adequacy of medical language for patients,
- continued support to patients and decision makers for the integration of health care and information for patients in community policies
- promotion of shared decision-making process between clinicians and patients and the development of tools and practices to support informed decision based on evidence obtained through research and best practice clinical models,
- creating an online space on sites where patients can ask a professional before moving to self-medication, and take the right decision to improve his or her health,
- development of standards that protect patients from misleading health information and which must be a stakeholders consensus
- certification online quality information through the development of tools which help determine the reliability of the documents accessed by checking and comparing the ideas with a set of references, and allowing users to determine the relevance of a given document from the results of a search page,
- development database design in a more accessible and intuitive way,
- fulfillment of patient expectations on the highest quality of care,
- ensure privacy and total anonymity for patients.
Tools and standards for evaluating the content of websites

In order to guide patients and consumers to trusted sites, many organizations have developed tools and standards for the evaluation of site contents.

The best known example is the website of Health On the Net Foundation. Health On the Net Foundation (HON), created in 1995, is a non-governmental non-profit organization, accredited by the Economic and Social Council of the United Nations Organization. HON is known internationally for its pioneering work in the field of health information ethics, notably to create its code of ethical conduct, the HONcode. For 15 years, HON has focused on the essential question of the provision of health information to citizens, information that respects ethical standards. The Health On The Net Foundation developed the "Code of Conduct" (HONcode) to help standardize the reliability of medical and health information available on the World Wide Web.

HONcode is the oldest and the most used ethical and trustworthy code for medical and health information available on the Internet. HONcode is designed for three target users: general public, health professionals and web publisher, actively involving the site owner in the certification process. HONcode certification is an ethical standard aimed to offer quality health information. Certification demonstrates the intention of a web site to publish transparent information. Transparency will increase the utility and objectivity character of the information and the publishing of accurate data. HONcode is the most widely accepted reference by medical editors as evidence for a health site. Currently, the HONcode is used by over 7,300 Web certified sites, with more than 10 million pages, covering 102 countries. HON website http://www.healthonnet.org/ is visited daily by 27,000 visitors from around the world.

HONcode developed eight principles of evaluation of websites with medical information [12]:

**Principle 1: Authoritative.** Any medical information provided or hosted by this website will be provided only by professional and qualified personnel in the medical field, unless there is a clear statement that shows that some information comes from a person or organization without medical qualifications.

**Principle 2: Complementarity.** The need for a warning that information is to support, not to replace information from your doctor.

**Principle 3: Privacy – Confidentiality.** Confidentiality of data relating to individual patients and visitors of the site, including their identity, is respected by this website. Site owners take all necessary measures and undertake to comply with legal provisions on confidentiality about personal and medical data, in force in the country or state where the site is.

**Principle 4: References.** The information contained in this site will be supported by clear references to source data and, where possible, have specific HTML links to that data.

The date when a clinical page was last modified will be clearly displayed (eg. The bottom of the page).

**Principle 5: Justification of claims.** Any claims relating to the benefits / performance of a specific treatment, commercial product or service will be supported by objective evidence.

**Principle 6: Transparency.** For visitors that seek further information, website designers will seek to provide as clear as possible information about contact addresses. Webmaster will display his email address clearly on the site.

**Principle 7: Disclosure of funding sources.** Identity of commercial and non-commercial organizations that have contributed with funding, services or material on this website, will be clearly specified.

**Principle 8: Advertising policy.** If advertising is a source of funding, it will be clearly stated. Also, on site is required to be available a short description of the advertising policy adopted by site owners. Advertising and other promotional material will be presented to viewers in a manner that facilitates differentiation between it and the original material of the website, created by the operating institution. These principles constitute a evaluation form, that can be applied online by any patient or health consumer, and the evaluation result shows the hazard on the site evaluated in comparison with a standard website.

Another worldwide recognized organization that has developed criteria for evaluating content of sites is Medical Library Association [13], an association of over 5,000 members - health professionals and institutions, which include the section CAPHIS (Consumer and Patient Health information Section). The organization was established a group of professionals, "Health Summit Working Group", which has developed criteria for assessing the quality of health information on the Internet, criteria approved by Medical Library Association and known as "CAPHIS criteria" [14]. These criteria are mostly the same as the 8 HONcode principles and include: credibility, sponsorship of site, the authors of the materials, content of materials, the audience they addressed, the validity of the data, the disclosure terms of the site, the objective of site, content of destination links, design and limitations. Compared to HONcode evaluation, where patients can evaluate a site, application of CAPHIS criteria need uniquely qualified personnel, through training and workplace internships.

**Romanian sites with information for patients**

A study conducted by Research Department of TradeAds Interactive, using a questionnaire with 23 questions that came online, between February 16 to February 23, 2012, with 3314 respondents, aiming to portray Romanian Internet users, shows that the need for information for Romanians have increased, and areas recorded increases of users interest are technology (+9.8% from 2010), education (8.6%), Arts, Culture, Society (+6.8%), Shopping (+6.4%) and sports (5.7%) [15].
Lack of medical sites in classification does not necessarily show that they are less accessed, because Internet users who responded to the questionnaire were young people, who generally don’t have health problems, and people over 50 years, which could present such problems, accounted for only 13.86%.

To see where health websites preferences of Internet users stand, I analyze how frequently general websites are accessed and health websites in particular, following the number of visits on the site.

Thus, according to the number of visits, rankings for December 2013 shows [3]:

<table>
<thead>
<tr>
<th>Table 1. Overall ranking of sites</th>
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</table>

Source: www.trafic.ro

In the overall ranking, there is just one health site, www.sfatulmedicului.ro, ranked 14th.

Health websites ranking shows that the most important information sought by users in medical field are related both to the disease and diagnosis and treatment, because the second ranking site is www.pcfarm.ro.

<table>
<thead>
<tr>
<th>Table 2. Ranking health sites</th>
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Source: www.trafic.ro

I found the same situation regarding the percentage of visits on sites:

As shown, the Romanians preferences for sites with health information move, by far, to the website: www.sfatulmedicului.ro. Due to the places that health sites occupy in the overall rankings, we may think that Internet users rarely access these sites. However, taking into account the fact that in December 2013 a total of 25,251 sites were visited, the situation changes, the top 10 medical sites are within the first 1.26% of all websites. This means that Romanians access websites with health information very frequently.

Comparing length of sites visit within a 1 year period, between 16.02.2013 and 15.02.2014, for www.sfatulmedicului.ro and www.adevarul.ro, the percentage of views is observed to be approximately the same for each of the six periods of time of a visit:

In terms of health, the duration of a visit on site is a good indicator for the behavior of Internet users. Interpreting the two variables together, it appears that a small proportion of visits, lasting over three minutes, 22.54% of all visits, comprise a large number of views, almost half of the total - 47.3%. This may mean that the 20% of Internet users are really interested in health information, having a personal interest in data searching.
In order to have a real base for comparison, I track the number of visits on the two sites, taking into account the period between February 2009 (in February 2009 began sites monitoring) and December 2013:

![Graph comparing the number of visits on February 2009 and December 2013](source: www.trafic.ro)

In February 2009, www.sfatulmedicului.ro was ranked the 39th in the overall standings, in comparison with December 2013, when was ranked the 14th, and the number of visits are 3 times less in 2009.

Guides with the best health sites

Health care information have to be accurate and from reliable sources, and in this context, health websites should provide valid information, as are the material written by health professionals.

In order to have sources of reliable information, in a relatively small number, CAPHIS section (Consumer and Patient Health Information Section) of Medical Library Association, released the document "Top 100 List Health Websites You Can Trust"[16].

A more detailed and specific guide of health sites is the "Guide to the Best Health Resources on the Web" of Dr. Harlan R. Weinberg [17]. The purpose and as well the novelty of this guide are that it facilitates access to the best health resources available on the Internet, eliminating the need to search on countless sites, thus improving the efficacy of search and the selection of the most appropriate medical information.

DISCUSSION

In Romania, as in the rest of the world, Internet users are beginning to be interested in medical information, in collecting it, and they either discuss each other that information in forums and virtual spaces for patients, or discuss it with doctors, enriching the doctor-patient relationship with a new perspective on the roles of both actors, that of partners.

Therefore, for Internet users, the evaluation of health romanian websites becomes necessary, because users have to trust that the information is reliable, updated, objective and transparent.

The concern for sites content and quality of information has emerged once medical knowledge was disseminated online, for the benefit of all health.

There are no publishers who provide inaccurate or false medical advice. But many sites offering health advices, as are for example hospitals - especially private ones-, laboratories, diagnostic and treatment centers with a specific pathology, often are interested to promote and to sell their latest health care products and services than to provide medical information.

There are sites that have a design with many links on the original website, whose access leads to commercial information, health products and remedies for sale; this is far from the medical information that was originally requested.

In order to have a real base for comparison, I track the number of visits on the two sites, taking into account the period between February 2009 (in February 2009 began sites monitoring) and December 2013:

<table>
<thead>
<tr>
<th>Website</th>
<th>Feb 2009 Visits</th>
<th>Dec 2013 Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://www.advarul.ro">www.advarul.ro</a></td>
<td>893,329</td>
<td>2,533,404</td>
</tr>
<tr>
<td><a href="http://www.sfatulmedicului.ro">www.sfatulmedicului.ro</a></td>
<td>761,674</td>
<td>3,605,742</td>
</tr>
</tbody>
</table>

Source: www.trafic.ro

In February 2009, www.sfatulmedicului.ro was ranked the 39th in the overall standings, in comparison with December 2013, when was ranked the 14th, and the number of visits are 3 times less in 2009.

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