

# Results of the 10<sup>th</sup> HON survey on health and medical Internet use

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**Abstract.** The Internet is increasingly being used as a means to search and communicate health information. As the mission of Health on the Net Foundation (HON) is to guide healthcare consumers and professionals to trustworthy online information, we have been interested in seeing the trend of the attitudes towards Internet use for health purposes since 1996. The article presents the results of the 10<sup>th</sup> HON survey conducted in July-August 2010 (in English and French). It was hosted on the HON site with links from Facebook and Twitter and from HONcode certified web sites. There were 524 participants coming mainly from France (28%), the UK (18%) and the USA (18%). 65% of participants represented the “general public”, while the remaining 35% were professionals. Information quality remains to be the main barrier users encounter while looking for online health information; at the same time, 79% believe they critically assess online content. Both patients and physicians consider the Internet to be helpful in facilitating their communication during the visit, although professionals are more sceptic than the general public. These results justify the continuing efforts of HON to raise public awareness regarding online health information and the ethical quality and transparency issues, and to educate and guide users towards trustworthy health information.

**Keywords** Survey, Health information, Internet usage, Internet

## Introduction

Since its inception, the Internet has been used for health purposes, and the trend is growing steadily. In the USA 61% of the population looked for health or medical information online in 2009 [1]. According to Harris Poll the percentage of all US adults who have ever searched for health or medical information online has increased from 27% to 76% from 1998 to 2010 and the percentage of those who do it sometimes or often (on average 6 times a month) increased from 42% to 73% [2]. Empowered healthcare consumers also use the Internet to communicate with peers and health professionals.

At the same time, both users’ scepticism and the demand for high quality information are growing. For example, in the USA, among those looking for health and medical information online, the number of people dissatisfied with their search results (from 6% to 9% in the last five years) or with the reliability of information (from 5% to 8% in last five years) has been increasing [2].

The Internet also influences the doctor-patient relationship. Doctors remain the most significant and valuable source of information for patients. In France, in 2010, patients preferred asking doctors rather than the Internet (89% vs. 64%) [3]. The Health Engagement Barometer Study (2008), conducted worldwide, revealed that 88% turn to their physicians to validate online information, but at the same time, the same number (88%) turn to other sources to validate information from their doctors [4].

As the mission of the Health on the Net Foundation (HON) is to guide the growing community of healthcare consumers and providers on the World Wide Web to sound,

trustworthy medical information and expertise, we have been interested in seeing the trend in the attitude towards Internet use for health purposes since 1996. In this article, the results of the 10th survey are presented.

## 1. Method

HON surveys use non-probabilistic sampling and cannot ensure that participants are representative of the entire medical and health information-user community on the Internet. However, taking into account the Internet use experience of participants (79% were online for 7 or more years), we believe they represent the most empowered and actively engaged part of the global Internet population seeking health information online. The survey was hosted on the HON web site in English and French between July and August 2010. The survey was open to anyone accessing the HON web page or its Facebook and Twitter accounts. It was also promoted through HONcode-certified web sites. The participants included general healthcare consumers (including patients) and healthcare professionals. The survey consisted of five parts, four parts were identical for both groups of respondents, and one part had two versions specifically designed for each group [5].

The questions had different types of answer.. The first one was “Yes”, “No”, “Maybe.” The second one was numbers (frequency or length of use). The third one required an answer on a “-4”-“+4” scale. For such questions we summed up the results into 3 groups: “disagree”/“rarely” (-4, -3, -2), “neither agree/often nor disagree/rarely” (-1, 0, +1) and “agree”/ “often” (+2, +3, +4). If two out of three groups of results were distributed equally (i.e. disagree 12%, neither 43% and agree 45%), we used “would rather agree (12% disagree)”, and vice versa. We mentioned the difference between the 2005 and 2010 results only where the difference was more than 10%. The 2005 survey had the same structure and questions similar to 2010 survey [6].

## 2. Results and discussion

### 2.1. Who is searching and for whom? When, where and what is being searched?

Over 500 people participated in the survey (524). 65% filled the questionnaire in English and 35% in French. 65% were individuals, patients, patients’ associations’ members (later referred to as “citizens”/“patients”) and 35% were health and medical professionals (later referred to as “professionals”, “doctors”).

Compared with the 2005 version, there were more female participants (65% vs. 50% in 2005). Some studies confirm that women are more likely to look for online health information [7] [8]. Most of the participants were aged 20-59, the most active group being those aged 30-39 (30%). In the US, most online health information seekers are aged 18-49 [8]. For those aged between 33 and 44, getting health information is the primary Internet activity [9]. Apparently, the geographical coverage of the studies and the different methodology used to collect answers explain the difference, however, generally the tendency is the same. Overall, respondents from 60 countries around the world filled the HON questionnaire, most participants coming from France (28%), the USA (18%) and the UK (18%).

On average, the respondents had been using the Internet for 7 years or more (79%) (44% in 2005). 96% of users spend time checking and writing emails and 93% browsing the web. 60% read newsletter and take part in online communities (28% in 2005) and 51% participate in online communities (23% in 2005). This shows the

growing popularity of web 2.0 services. The Internet is being used to retrieve information, but also to communicate with peers [10].

In 79% of cases a web search is the starting point to clarify medical information obtained from physicians, the Internet etc; and the frequency of search engines use has increased from 86% in 2005 to 94% in 2010. Secondly, web sites about specific health topics were listed (73%), and thirdly there were links from health web sites (66%). The importance of web sites suggested by a healthcare provider increased from 31% in 2005 to 43% in 2010. Specialised search tools such as HONselect have lost popularity (29% in 2010 vs. 52% in 2005). The majority of users (61%) visit two to five web sites and 25% visit up to 10 sites.

44% of users search for health information more than three times a week, 25% do it slightly less frequently (two to three times). We found no correlation between time spent searching health information and consultation time with a healthcare provider.

Of all health information web sources, the most popular are medical journals or publishers (85%), hospitals (77%), universities and governmental agencies (76%) and non-commercial medical organizations (74%). Over the last 5 years the importance of hospitals as a source of online health information has significantly increased from 60% to 77%.

Respondents mostly search disease description (69%) and medical literature (62%). Other topics include: clinical trials (28%), patient community (24%), alternative medicine (22%), support groups (19%), weight loss (17%) and others (26%).

Regarding medications, citizens mostly search for drug side effects (60%), safety (54%) and efficacy (52%). Over the last five years there were fewer searches on drug interaction (from 59% in 2005 to 47% in 2010). Generic drugs and information regarding herbal or alternative treatments are frequently searched by 37% of citizens. Patients who participated in the survey rarely buy prescription (only 10% declared they did) or OCT (12%) drugs via the Internet.

## 2.2. Difficulties of online health search

We have asked participants about the difficulties they face when searching for online health information. For each barrier a scale of -4 to +4 was proposed.

Access to reliable medical information was considered important by English- (96%) and French- (76%) speaking respondents. At the same time, information quality remains the main barrier users encounter while looking for health information online (80%). Among others, significant barriers were medical data privacy (54%) and Internet connection speed (dropped from 62% to 45% in last 5 years). Inadequate tools and applications, lack of time and lack of support for Internet in office setting also created obstacles in health-related Internet search were considered less important. Internet training is not considered as an obstacle anymore by 47% of respondents (in 2005 this was still an obstacle for most participants, whereas for 34% of them it was not a barrier).

The following factors are considered among the most valuable for improving the quality of online health information and services:

- Trustworthiness/credibility – 96%
- Accuracy and availability of information – 95%
- Ease of finding information/Navigation – 93%.

Information transfer rate (74%), privacy (73%), accessibility in terms of language and physical impairment (69%), and scientific complexity of information (59%) play a less important role. Commercialisation/advertising and sponsorship are not considered as quality-enhancing factors (from 31 to 42% in 5 years), neither are spam (44%) and Pay-to-view/Pay-for-use information or services (42%).

Most citizens (78%) prefer to have the option of seeking complex medical information, especially the French-speaking ones (91%). while 57% consider consumer web sites to be often superficial.

What domains do users trust? Not surprisingly, .edu (70%), .gov (69%) and .org (65%) domains remain the most credible. The.com domain was considered neither credible nor non-credible by 52% of respondents. National domains have gained more trust among French-speaking participants (64%) compared with English-speaking ones (19%). This may be potentially dangerous because .fr domains can be used by fictitious organizations or ones that are not based in France, and this can mislead users considering the .fr domains to be as trustworthy as .gov for example.

Who should be responsible for information quality? Most respondents think quality should be ensured by associations representing non-profits organizations, both international (72%) and national (71%), and NGOs (69%). Over the last 5 years, the importance of NGOs has increased significantly from 46% to 69%.

79% believe they critically assess online health information and 83% state that they verify whether the web site is trustworthy or not by checking the source of information (88%), motivation (68%), URL (commercial or not) (66%) and, the sources of funding (55%). However, only 13% of users think their family and friends verify the trustworthiness of web sites, while most of them remain undecided. 49% state they are not anxious when conducting a web search, and 75% do not consider themselves to be cyberchondriatic. The majority (74%) of respondents said they were aware that the ranking of search results could be manipulated by commercial interests.

The HONcode seal was the most recognized trust mark among participants of the survey (50%). There was however a significant difference between English-speaking and French-speaking respondents regarding the popularity of the HONcode. 41% of English-speaking participants knew the HONcode seal along with Good House Keeping (36%) whereas 67% of French-speaking participants knew it because of the HON-HAS collaboration (La Haute Autorité de santé, French National Authority for Health). 76% think that hospital web sites containing health information should always be certified. 66% also consider it appropriate for physicians' web sites and 46% - for web sites selling software.

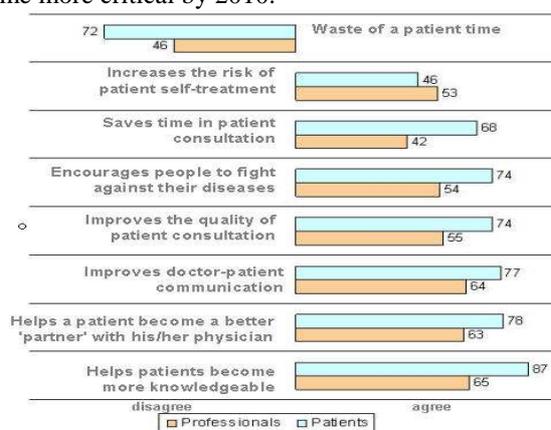
### *2.3. Doctor-patient relationships, perspectives from both sides*

Both citizens and professionals were asked whether they discuss the Internet search results with their doctor. 53% of citizens declared that they did. As for professionals, 62% said they engaged in such communication (75% of English-speaking and 47% of French-speaking).

Those who discuss it think that overall, the effect on patients is positive: it helps patients become more knowledgeable and have a relationship with their physician, it improves communication between the patient and physician, and encourages people to fight against their disease. However, doctors are less enthusiastic than patients and think that it also increases the risk of patient self-treatment (more than patients thought of it) (Figure 1).

However, we could not reach a certainty on certain questions. For example, both professionals and patients rather agree that it increases adherence to a physician's advice (22% and 11% disagree respectively) and instructions on taking prescribed pharmaceuticals (12% and 15% disagree respectively). The most controversial issues turned out to be (1) whether discussing online health information fosters patient mistrust and (2) whether it encourages patients to challenge a physician's authority. With regard to the first issue patients rather think it does not (17% think it does) whereas physicians rather think it does (21% think it does not). Regarding the second issue, patients remain undecided whereas 14% of doctors think it does not.

Comparing all these findings with the ones of 2005 we see that both doctors and patients have become more critical by 2010.



**Figure 1.** Influence of Internet on doctor-patient communication.

80% of citizens keep thinking that a healthcare provider should suggest trustworthy sources of online health information. 72% of professionals agree it would be helpful for them to provide patients with such information (in 2005, only 59%). Most physicians would use a trustworthy online service that allows them to suggest web sites to their patients, especially if it is free for the patient (87%). However, so far 78% of patients say healthcare providers have never given them such information.

### 3. Conclusions

The survey findings demonstrate that the target audience is becoming more critical and less satisfied with the quality of online health information. Their worries have solid bases as there is a huge amount of misleading information. Most respondents recognise this problem and believe they critically assess online health information.

Although more than 500 answers do not represent all points of view, we believe that the growing scepticism on the part of physicians and patients justifies continuous efforts from HON and webmasters to increase public awareness of quality issues. First, we need to create more awareness among Internet users of reliable tools for “healthy” online surfing. Secondly we have to educate both the general public and health professionals. In the same direction, the UK Nuffield Council on Bioethics urges physicians to guide patients searching for health information on the Internet [11]. Medical students and practicing doctors could have such courses as a part of their curriculum. We believe that a similar course should be created for patients in Internet settings to meet their needs and adjust their background regarding the use of evaluation mechanisms. And thirdly, patients and doctors need a communication tool which would be easy to use, save time during consultations, decrease professionals’ workload, and provide patients with trustworthy sources of information to avoid reliance on misleading information.

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