

# Parent's use of the Internet in the search for healthcare information and subsequent impact on the doctor–patient relationship

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Received: 25 July 2016 / Accepted: 11 January 2017 / Published online: 27 January 2017  
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## Abstract

**Background** The Internet is an unavoidable source of healthcare information. This information, both reliable and unreliable, has previously been shown to influence carer's decisions.

**Aims** Our aim was to evaluate this information seeking behavior among parents and its subsequent potential impact on the doctor–patient relationship.

**Method** We undertook a cross-sectional questionnaire-based survey of paediatric outpatients. Enrollment took place over 4 weeks in March 2015. There were no inclusion or exclusion criteria and enrollment was voluntary. In total 100 questionnaires were completed.

**Results** General Practitioners were the most common source of healthcare information. The Internet ranked third as a reliable source of healthcare information. The Internet was commonly used as an educational resource to learn about causes, treatment, and medications. A significant percentage of our population expressed concern regarding Internet information reliability. A small percentage of parents were concerned that disclosing Internet usage may worsen the relationship with their doctor.

**Conclusions** Parents showed a willingness to learn about diseases and treatments, and felt that the Internet was a good resource to do so. This study shows that open discussion about Internet usage between parents and doctors is not common and carers feel at risk of judgment should they admit to Internet usage. The Internet should be seen as a positive adjunct to patient education which can improve

understanding, thus strengthening the doctor–patient relationship. The Internet will never replace the role of healthcare professionals but must be seen as an integral part of a multi-disciplinary approach.

**Keywords** General paediatrics · Patient perspective · Relationships · Internet

## Background

The Internet is now pervasive throughout society with information available at our fingertips through smartphones and tablets. As a result, the Internet, along with other media sources, is an unavoidable source of healthcare information. There is minimal effort required to search online making the Internet a far more convenient information source than scheduled clinic appointments or ED visits. Access to this information may not only influence parent's attitudes and decision-making, but also those of the child themselves dependent on their age [1].

To our knowledge, few studies have looked at the role that the Internet plays in the health seeking behavior of parents. As our society becomes ever more multi-cultural and access to technology increases, the traditional pathways to seeking healthcare information are being altered as barriers, such as language, are destroyed [2].

Despite the fact that medical professionals and print media have traditionally been an information source for parents, it is widely recognized that useful information is available for parents online [3]. As a result, the Internet is a popular choice when looking for information and can be a particularly useful resource in an adolescent population where embarrassment and stigma surrounding certain health matters may lead to healthcare avoidance [4].

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Qualitative studies have shown that the primary role of the doctor–patient relationship is to deliver health information with the Internet acting as a complimentary source rather than an opposing factor [5]. In a previously strongly patriarchal society, there is a fear among some that increased Internet usage may lead to a change in the currently asymmetrical doctor–patient relationship. This is despite decades of strong evidence that patient participation in health decision-making is beneficial [6].

We felt that it was important to look at parent’s rationale for using the Internet when looking for healthcare information. We question the most common methods used and investigate that any potential implications Internet usage may have on the doctor–patient relationship.

Our aim is to establish current attitudes towards the usage of Internet healthcare information, so that we can ultimately optimize the information available and guide patients to reputable sources. The Internet is not disappearing, and as it appears that online influence is going to increase, every effort should be made to use it as an asset and work with our patients to get the best return from it.

## Method

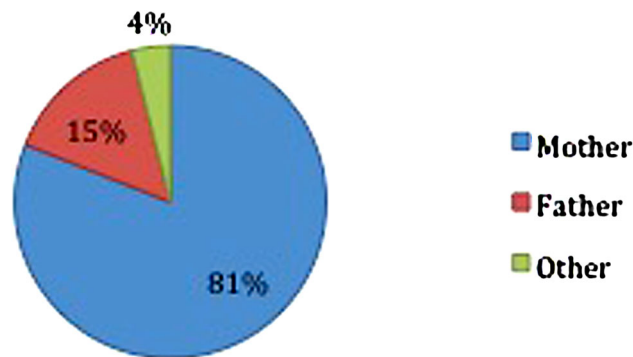
We undertook a cross-sectional survey that was administered in waiting rooms of a paediatric outpatient department in a regional hospital. A validated questionnaire with 24 individual questions of a tick box structure was used. We invited all parents attending the clinic in University Hospital Kerry to participate. There were no inclusion or exclusion criteria. The study was open for participation for four weeks from 02/03/15 until 27/03/15 inclusive. All participation was voluntary. Once collected, the data were logged into an MS Excel spreadsheet for analysis. Patients were grouped into three age bands to simplify analysis.

## Results

### General demographics

In total, 100 questionnaires were completed. In 96% of cases, they were completed by parents, 81% by mothers, and 15% by fathers. The remaining 4% of questionnaires were completed by grandparents (Fig. 1). Of the 100 patients whose carers completed questionnaires, 53% were male and 47% were female.

The majority of patients, 35%, were aged less than 3 years. The number of patients occupying the other age



**Fig. 1** Relationship of person filling out questionnaire to clinic patients

bands was of a fairly even distribution, as shown in Fig. 2. Seventy-eight percent of carers completing the questionnaire had more than one child. The ages of these other children were younger in 28% of cases, older in 39%, and both younger and older in 33%.

### Previous interaction with a healthcare setting

Ninety-three percent of those attending had previously been to a hospital with their child. Of this 93%, 17% ( $n = 16$ ) had been diagnosed with a chronic illness, the types of which are outlined in Fig. 3. Ten percent of the total clinic population was attending services other than local paediatric services. These other services included Specialist Centres, Child Psychiatry Services, and allied disciplines within the same hospital.

### Preferred source of healthcare information

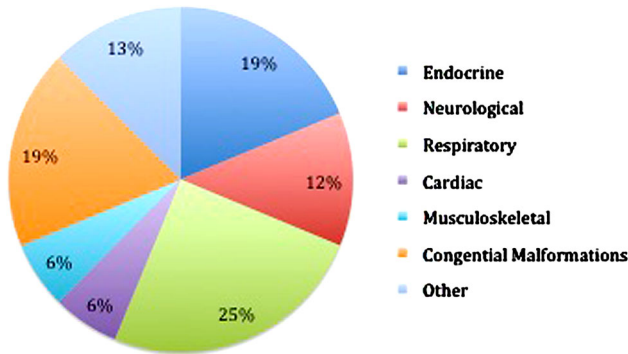
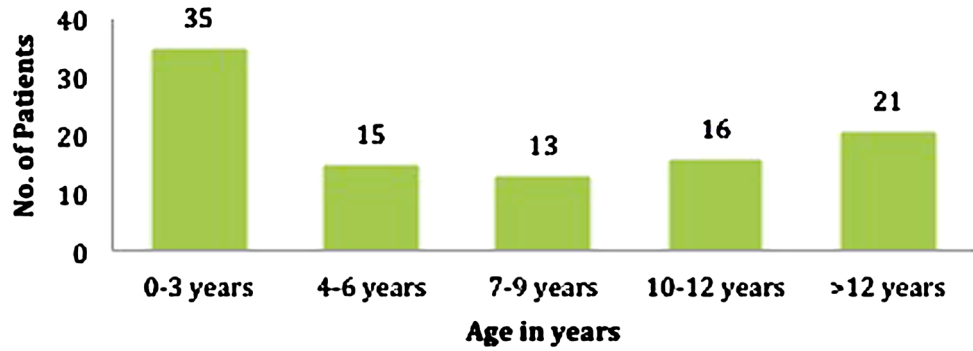
As a first source of information, General Practitioners were the most common with 62% of carers stating them as their first choice. Of those who did not choose the GP as their first choice ( $n = 38$ ), 89% said that their GP would be their second choice should it be required.

Family was also a popular first choice with 26% of those looking to them first when health information was required. A full breakdown can be seen in Fig. 4.

Based on the preferences, General Practitioners were the most popular source of information. In descending order, GPs were followed by family, the Internet, a GP nurse, friends, and “other” sources. The most common source of information which fell into the “other” category was direct access to specialist teams in tertiary referral centres.

Specific populations were more likely to use the Internet for information. One such population was the parents of children with chronic diseases. This association, however, was not statistically significant,  $X^2 = 0.8084$ ,  $p = 0.37$ .

**Fig. 2** Age of patients whose carers completed questionnaires

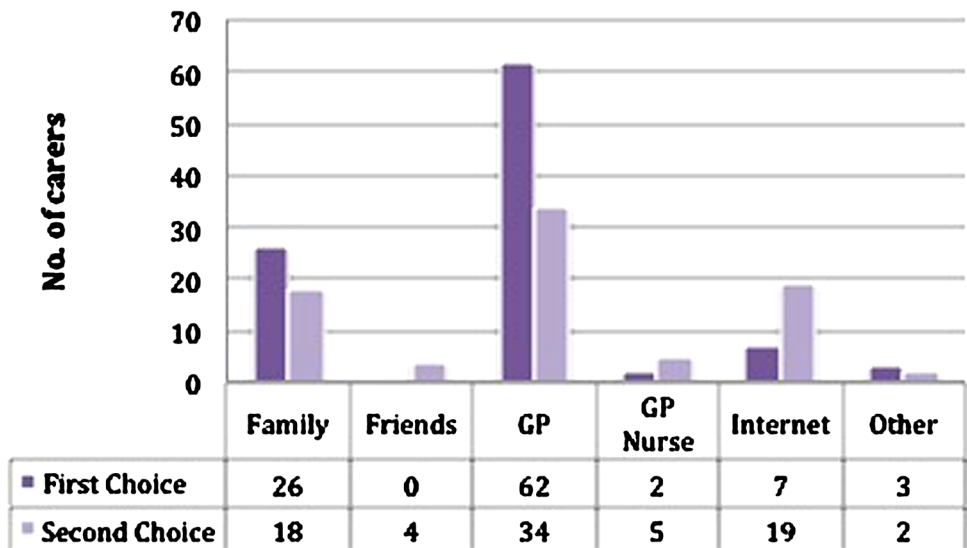


**Fig. 3** Subtypes of chronic illnesses

**Specific use of the Internet when looking for healthcare information**

Specific use of the Internet varied widely as can be seen in Fig. 5. Internet sites specifically tailored to parents were the most popular information source at 40% ( $n = 44$ ) followed by sites for medical professionals at 27% ( $n = 29$ ), open forums at 17% ( $n = 19$ ), and “other” sites at 16% ( $n = 17$ ).

**Fig. 4** First and second preferences of carers when looking for healthcare information regarding their child



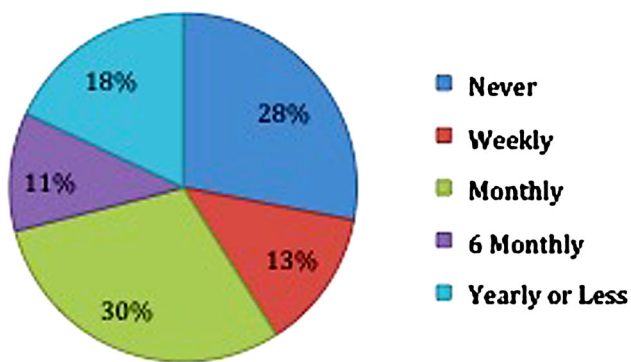
The Internet was used during all stages of the interaction with a healthcare professional. Thirty-one percent of those surveyed used the Internet on returning from the GP, 28% both before and after the GP visit, and 22% before the GP visit. Nineteen percent of carers ( $n = 14$ ) used the Internet as a source of information independent of an interaction with a healthcare professional.

Reasons for using the Internet are shown in Fig. 6. Of those who used the Internet, 83% did so to learn more. The breakdown of what type of information was being sought is shown in Fig. 7.

**Concerns regarding use of the Internet as a source of healthcare information**

Concern about the quality of available Internet information was considerable. Of the total population, a total of 70% expressed concern about the quality of information. Of this 70%, 17% ( $n = 12$ ) stated constant worry with 83% stating only worrying sometimes about information quality.

Forty percent of those surveyed stated that they tell their general practitioner about Internet usage. Ninety-two percent of the total population felt that telling their GP about



**Fig. 5** Frequency of use of the Internet to access healthcare information

Internet usage would not change their relationship; however, 2% felt that it might worsen the relationship. Nine percent of the population felt that they may be judged negatively by their GP if they disclosed their Internet use. Twenty-two percent of the population expressed “other” concerns, apart from judgment and a worsening relationship, as a reason for not disclosing their Internet usage to their GP.

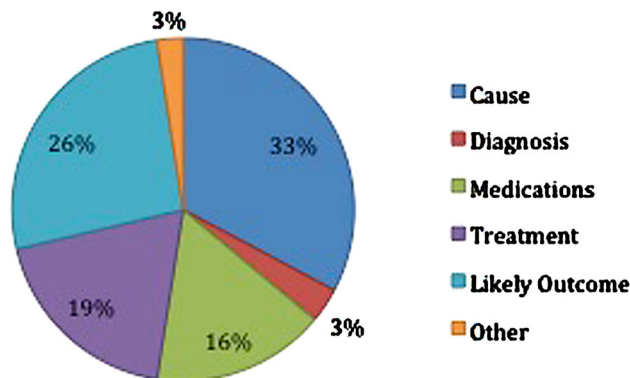
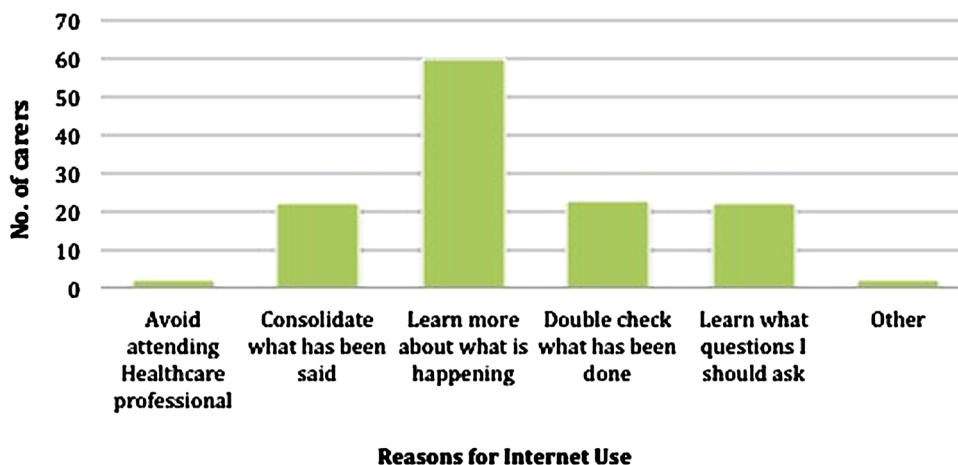
Sixteen percent of the survey population felt that they needed to use the Internet for reasons outlined in Fig. 8. An increased level of control was expressed by 46% of the population when the Internet was used for healthcare information.

Seventy-one percent of the population stated that they would like to know of reputable and reliable Websites where they could source healthcare information for their children.

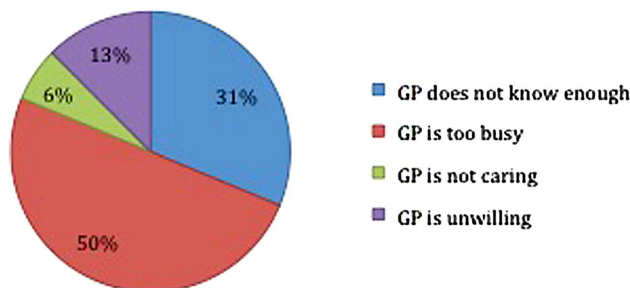
**Discussion**

Our results show that our survey population is a good representation of the general population when we look at age, gender, and prevalence of chronic diseases. As our hospital is

**Fig. 6** Reasons of caregivers for using the Internet to source health information



**Fig. 7** Specific information being sought by caregivers when using the Internet



**Fig. 8** Breakdown of reasons why 16% of the population felt that Internet use was essential as a source of healthcare information

not a specialist center, many children would have attended with general concerns also representative of an Irish population. Of note, the parents of children with chronic diseases were more likely to utilize the Internet as an information source. This is in line with the previous studies [7].

In many homes, the majority of the responsibility for healthcare is held by one of the parents. Our study population was mainly made up of mothers completing the questionnaires and our results may reflect maternal attitudes towards Internet usage to a greater degree.

As expected, general practitioners were the preferred first source of information for the majority. The questionnaire did show, however, the way in which the Internet was commonly used to compliment information garnered during a GP consultation. The popularity of GPs and family members as an information source reflects the conservative approach taken by many of our population. Our questionnaire did show GP nurses to not be as popular as many other sources of information. Although not explored in this study, this could be due to a lack of GP nurses in many local General Practices.

Of concern were the fears expressed by parents about negative judgment if they shared their Internet usage with their general practitioner. This is worrying as it risks undermining the essential trustful nature of the doctor–patient relationship.

The Internet was shown to be specifically used an education tool. Parents consistently used the Internet to look for information on all aspects of an illness. Previous studies have also demonstrated this willingness by parents to use the Internet as a health information source [3]. Some studies have shown that the use of information prescriptions can result in positive parental attitude and behavior changes [8]. These changes resulted in increased Internet usage for general children's health information as well as an increased use of high-quality resources.

The wish to avoid consulting a healthcare professional does not appear to be a motivating factor when seeking information on the Internet. Studies have shown that use of the Internet to seek healthcare information does not, positively or negatively, affect consultations [9]. This is consistent with our study findings.

Many parents have concerns about the reliability of information when using the Internet [10]. This was reflected in our study population. It cannot be denied that there are multiple sources of incorrect information available on the Internet for even the most common problems, such as cough and fever [11, 12]. This is not only demonstrated by multiple systematic searches but also numerous case reports which outline the detrimental effects access to such information can have on a child's health [13]. Moreover basic information relating to hospital access and facilities has been shown to be substandard [14]. This highlights the important point that even when all relevant informations are available, it may not be user orientated. This demonstrates the need for healthcare professionals to make reputable sites available for their patients and their carers. An overwhelming majority of this study population expressed the desire for a reputable source of online information.

A limitation of our study is that we assumed there to be widespread Internet access among our population. Previous studies evaluating parental Internet usage have looked at

access to Internet by parents [7, 10]. Most of these studies were done within the last decade and we have assumed that access to and usage of the Internet has increased during this time.

We did not specifically look at the education of the caregivers, and therefore, it is impossible for us to determine if this would have had any effect on their Internet usage. Previous studies have shown that both usage and access are higher among those with higher education and incomes. Ethnicity was shown not to have an effect [15]. Perceptions related to Internet usage have not been shown to differ among different socioeconomic groups [8].

Participants who filled out questionnaires were invited to take part, and therefore, there is a risk of bias.

## Conclusion

The Internet possesses a massive amount of healthcare information which can be both reliable and unreliable when utilized by parents. Parents within our study showed a willingness to learn more about diseases and treatments, and felt that the Internet was a good resource available to them to do so. As healthcare professionals, we should enable our patients and their carers by providing reliable sources of healthcare information in an easily accessible format.

This study has shown that open discussion about the usage of alternate sources of information is not common and carers feel at risk of judgment should they admit to using the Internet. The Internet should be seen as a positive adjunct to patient education which can improve understanding and care thus strengthening the doctor–patient relationship. The Internet will never replace the role of the healthcare professionals in paediatric care but must be seen today as an integral part of a modern multi-disciplinary approach.

## Compliance with ethical standards

**Conflict of interest** We have read and understood IJMS policy on declaration of interests and declare that we have no competing interests.

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