

Do otolaryngology out-patients use the internet prior to attending their appointment?

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Abstract

The Internet has become a very important source of health information. We wanted to determine otolaryngology patients' access to, and use of, the Internet as a medical information resource, to identify factors that make patients more likely to use it, and to determine how useful they find this information.

A questionnaire survey was completed by patients while waiting for their consultation in the out-patient department of the Royal National Throat Nose and Ear Hospital in London. Five hundred and thirty-five questionnaires were completed. Sixty-four per cent (344/535) reported having access to the Web. Of the 344 with access, 62 (18 per cent) had searched the Web for medical information prior to their consultation. Higher education ($p < 0.001$) and age between 18 and 40 years ($p = 0.001$) correlated significantly with higher Internet use. Ninety-five per cent planned to use the Internet again.

Approximately one out of five otolaryngology out-patients with Internet access reported having obtained medical information from the Web before their consultation. The majority found it helpful to some degree and were planning to use it again. As clinicians we should be aware of this use and the onus should be on ourselves to review these sites in order to guide our patients to sources of reliable and helpful medical information on the Internet.

Key words: Internet; Patient Education; Outpatients; Otolaryngology

Introduction

Use of the Internet is widespread with people having access to vast sources of information directly to their homes or workplace. It was estimated in September 2002 that approximately 57 per cent of the population (34.3 million people) in the UK were using the Internet on a regular basis.¹ Medical information is no exception. A survey carried out by an independent research company, Datamonitor, of approximately 4500 people across France, Germany, Italy, Spain, the UK and USA, found that 57 per cent of people who looked for health information in the past year had consulted Internet sources.² Any information source needs to be evaluated in terms of availability (access) and quality (content). It is a doctor's duty to appreciate the knowledge base of his/her patients. We hear of more anecdotal stories from colleagues who have been handed over printed sheets of information which have been downloaded by patients. This new form of access to medical information could have wide-ranging effects in the doctor-patient relationship and even raise public health issues. We created this study to explore further ways in which otolaryngology out-patients use the internet for obtaining medical information.

Method

The questionnaire used was adapted from one used by a gastroenterology department.³ Questions asked included: patient demographics, internet access, where access was available, names of specific sites or search engines used, quality and helpfulness of information and whether they would use it again (Appendix).

Questionnaires were handed out over a randomly selected month in the Out-patients Department of the Royal National Throat Nose and Ear Hospital. These were completed by the patient and handed back before they left the hospital. Chi square and Fisher exact tests were used for proportion comparisons, as required. Results were analysed with SPSS® 6.0 statistical software.

Results

A total of 535 questionnaires were completed, with roughly equal proportions (0.84:1) of men and women. The median age range was between 41–65, while the median educational level was 'O' levels. The characteristics of the subjects are shown in Table I.

TABLE I
PATIENTS CHARACTERISTICS

| Sex | | | |
|-----------------|-----------|---------------|--|
| | Frequency | Valid percent | |
| Female | 289 | 54.1 | |
| Male | 245 | 45.9 | |
| Missing | 1 | | |
| Total | 535 | | |
| Age | | | |
| | Frequency | Valid percent | |
| <18 | 30 | 5.5 | |
| 18–40 | 201 | 37.8 | |
| 40–65 | 213 | 40.0 | |
| >65 | 89 | 16.7 | |
| Missing | 2 | | |
| Total | 535 | | |
| Education level | | | |
| | Frequency | Valid percent | |
| No education | 158 | 31.1 | |
| GCSE/'O' Levels | 108 | 21.1 | |
| A Levels | 61 | 12.0 | |
| University | 180 | 35.5 | |
| Missing | 28 | | |
| Total | 535 | | |

Out of the total sample 344/535 (64 per cent) had access to the Internet, with 268/344 (78 per cent) of respondents being able to access the Internet from their own home. Overall, access to the Internet was provided as follows: home: 167/344 (48.5 per cent); work: 45/344 (13.1 per cent); public facility: 29/344 (8.4 per cent); home + work: 94/344 (27.3 per cent); home + public facility: 3/344 (0.9 per cent); work + public facility: 2/344 (0.6 per cent); home + work + public facility: 4/344 (1.2 per cent) (Figure 1).

Out of a total 535 subjects 62 (12 per cent) used the Internet to get information about their condition before their consultation, representing 18 per cent of the subjects who had access to the Internet. Men were slightly more likely than women to use the Internet, (13 per cent (31/245) of men used the Internet as compared with 10 per cent (30/289) of women), although the difference was not statistically significant ($p = 0.416$). However, there was a significant difference in the age range as well as the educational level of patients who were more likely to

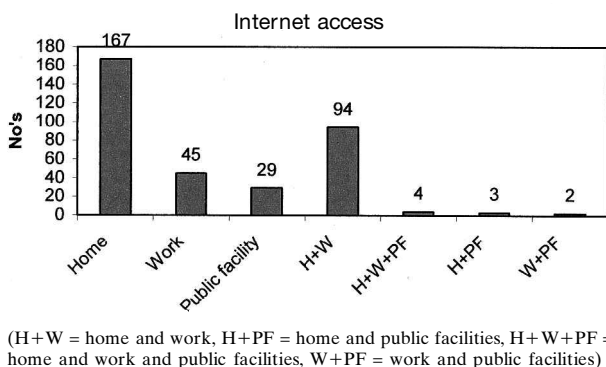


FIG. 1
Location of internet access.

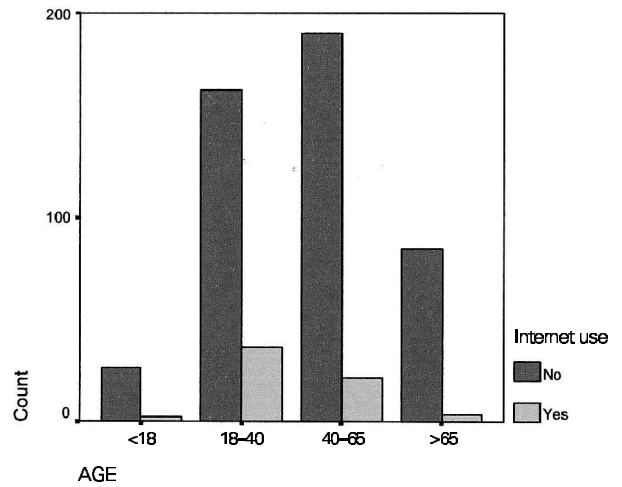


FIG. 2
Distribution of internet use among different age groups.

use the Internet as a source of medical information (Figure 2). Patients aged between 18 to 40 years were the most likely to use the Internet 36/62 (58 per cent) ($p = 0.001$), followed by 41–65 years 21/62 (34 per cent), then >65 years 3/62 (five per cent) and <18 years the least 2/62 (three per cent).

The educational level also had a bearing on the level of Internet use. Patients with university education were most likely to use the Internet 43/62 (69 per cent) ($p < 0.001$), while those with no further education were the least likely to use it five out of 62 (eight per cent) (Figure 3). When we asked for the websites used, 35/62 (56 per cent) were unable to name a specific site, 19/62 (31 per cent) quoted using a search engine, five patients used NHS direct site, while most other sites mentioned were public, not for profit sites.

The opinion of respondents about the quality of information was mixed, as 22/62 (35 per cent) felt the quality of information to be high, 37/62 (60 per cent) moderate and three out of 62 (five per cent) poor. As a result, 17/62 (27 per cent) felt the information was very helpful, 37/62 (60 per cent) moderately helpful, four out of 62 (six per cent) unhelpful and four of 62 (six per cent) confusing (Figure 4).

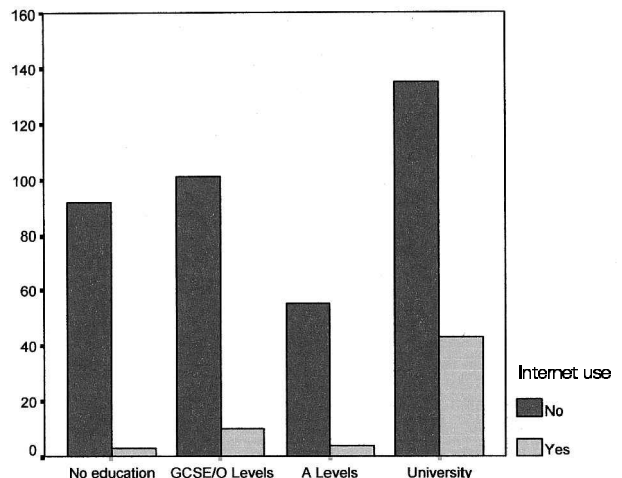


FIG. 3
Distribution of internet use among different educational levels.

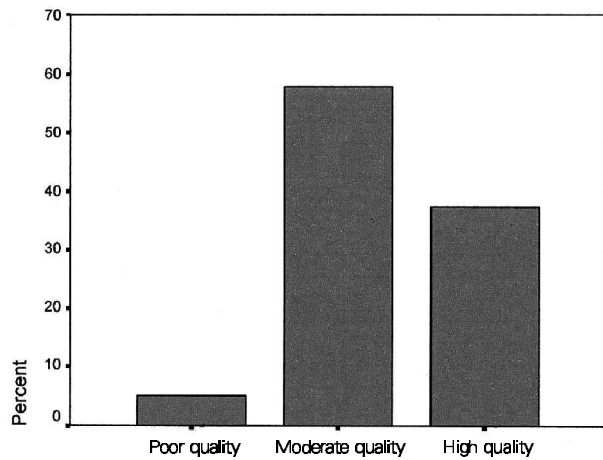


FIG. 4

Rating of information found on the internet.

More importantly perhaps, 58/62 (93.5 per cent) stated that they would use the Internet again, while only one out of 62 (1.6 per cent) would not and three out of 62 (4.8 per cent) were not sure (Figure 3).

- **This paper is based on a survey of the use of the Internet by patients in obtaining information about their symptoms**
- **The paper identifies those most likely to use the Internet by sex, age and educational background. It also rates the sites accessed as to the patient's perception of the degree of usefulness of the information obtained**
- **It is concluded that doctors should browse the sites used by patients in order that they can ensure that patients are directed to appropriate sites**

Discussion

In this study, 18 per cent of otolaryngology out-patients who had access to the Internet used it to gain information about their problem before their consultation. This is consistent with other studies showing similar results (24 per cent in a paediatric orthopaedic clinic⁴ and 29 per cent in a genetics clinic⁵). In one study of 350 patients in an orthopaedic clinic only 8.29 per cent used the Internet.⁶ A number of studies have found a higher proportion of patients using the Internet, 51 per cent in a gastroenterology clinic,³ 52 per cent in an orthopaedic out-patients' clinic⁷ and 53.5 per cent in a primary care clinic.⁸

As we have shown in our study, age and educational level had a significant bearing on use of the Internet, therefore public populations with different case mixes are expected to have different rates of Internet use. The questionnaire was available to patients in mainly general ENT clinics as well

as a few specialized clinics e.g. head and neck oncology, sleep apnoea and snoring and glue ear clinics. This provided a good distribution of patients across the age ranges. The Royal National Throat Nose and Ear Hospital has a large catchment area covering a wide range of population strata. It is also a tertiary referral centre taking referrals from all over the country. This reduces an element of geographical bias that could occur should the hospital serve only a small catchment area. However, it does appear that in other regions patients may be less inclined to use the Internet. A recent study in ENT out-patients performed in Warrington showed that the proportion of patients using the Internet to obtain medical information prior to their consultation was lower than in London (13 per cent) albeit still significant.⁹

This questionnaire was completed by patients waiting for their consultation in the department. This reduced the response bias compared to postal questionnaires where more motivated people might reply. However, as the questionnaire required use of the English language this may have produced some response bias, with patients not able to understand English declining to fill in the questionnaire.

The public felt the information available on the Internet was generally of good quality and helpful. The majority would use it again i.e. 58/62 (93.5 per cent). This is significant because it shows people are prepared to seek information independent of their medical practitioner, are satisfied with what they have read and are keen to use the Internet again. We need to be aware, as doctors, of this increasing use for a number of reasons. Patients may have more concerns and therefore more questions. Information they have read may not be understood or misinterpreted with resulting explanations adding to consultation time, as shown in a recent study on paediatric orthopaedic patients.⁴ Our study found the largest age range was between 18–40, 36/62 (58 per cent), of a university education 43/62 (69.4 per cent). There was no significant difference in sex.

Approximately 30 per cent of people using the internet for obtaining medical information used a search engine. This could direct them to a number of websites, leaving them vulnerable to misleading or confusing information, as a recent study showed that as many as 63 per cent of medical information web sites were commercial with 23 per cent of all websites offering unconventional or even misleading information.¹⁰ A follow-up on a previous British Medical Journal study examining the quality of information on the Internet, showed that although there has been some improvement over the last few years, serious concerns still exist about many websites.¹¹ Although many instruments exist for measuring the quality of medical information on the Internet, none of them has been validated.¹²

As clinicians we must become more proficient in the use of the Internet for obtaining medical information and must also be able to guide patients to reputable sites, such as the British Association of Otolaryngologists – Head and Neck surgeons patient

information web site,¹³ the British Deaf Association web site,¹⁴ the National Patient Information web site,¹⁵ the RNID web site,¹⁶ the cancer BACUP information service for patients with head and neck cancer¹⁷ and of course the NHS Direct and our own hospital web site. Reliable information provided from the Internet can actually improve patient's understanding of their condition and even take some of the burden off the doctor in this environment of increased expectations and reduced consultation times.

It seems likely that as Internet access increases with time there will be a corresponding increase in Internet use for medical information, especially in the older age group. Rather than seeing the Internet as a foe we could use it as an opportunity to create partnership with the patients.¹⁸

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Appendix

1. Are you male or female? a) Male b) Female
2. How old are you? <18 18–40 41–65 >65

3. What is your education background? a) O levels/GCSE's b) A levels
 c) University d) None of previous

4. Do you have access to the Internet?

- a) No b) At home c) At work d) Public facility

5. Did you look up your condition on the Internet

- a) Yes b) No

6. If YES, which site did you use?

Please specify

.....

7. What do you think of the quality of the information you obtained?

- a) High quality b) Moderate c) Poor

8. Was the information you obtained helpful in understanding and making choices about your condition or did it confuse you and make things more difficult?

- a) Very helpful b) Moderate helpful c) Unhelpful d) Confusing

9. Would you use the Internet again to look up medical conditions?

- a) Yes b) Not sure c) No