

## **Pattern of use of medical information made available via an Internet website.**

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### **ABSTRACT**

The Internet is probably the fastest growing means of public communication. Those who seek health and medical information are using it increasingly. We decided to study the pattern of use of medical information made available via an Internet website.

**Method:** Retrospective analysis of the entries made on the guest book and direct inquiries made to the webmaster of an established and well known Sri Lankan medical website from 1 February 1997 to 20 November 1998.

**Results:** During this period 23 373 web surfers visited the site. There were 222 guest book entries and 12 direct inquiries to the webmaster. The analysis of these entries and inquiries show that there is a wide gap in use of the information available at this website between web surfers from the developed and the developing countries.

**Conclusion:** Unless governments in developing countries plan to make computers and information technology as well as telecommunication services affordable and widely available, the Internet will only be a dream to their people.

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### **INTRODUCTION**

During the past decade, the Internet or the worldwide network of computers as we call it today, has become a household name. At the same time it has gained prominence as a means of seeking and communicating medical information (1). The complex nature of this new form of communication and the way people as well as health care providers communicate in cyberspace is bound to influence the way medicine is practiced in the next decade. Attempts to look at "cyber-medicine" objectively have been hampered more by the suspicion with which many doctors treat new technology than due to any other reason. As a result even today anecdotal reports (2,3) by enthusiastic doctors are the main form of publications in medical journals on "cyber-medicine". The move towards scientifically analysing "cyber-medicine" is still in its infancy (4) and published data on the pattern of use of medical information made available via Internet websites from developing countries is scarce.

### **METHOD**

We retrospectively analysed the entries made in the guest book and direct inquiries made to the webmaster of the "Genetic Disorders and Birth Defects – Sri Lanka Collection" website (<http://infolanka.com/org/genetics>) from 1 February 1997 to 20 November 1998. This website is the official website of the Human Genetics Unit of the Faculty of Medicine Colombo. It aims to make available information about genetic disorders and birth defects most relevant to Sri Lanka on the Internet and to create a resource site which would be useful to the general public, patients, students, health care providers and researchers. It is listed in all the major search engines on the Internet. Furthermore many prominent genetic websites on the Internet including the Human Genome Project provide links to it. This site has the distinction of being the only comprehensive genetics website from a developing country on the Internet. It was voted as one of the best educational resources on the Internet in the genetics category by StudyWeb USA (<http://www.studyweb.com>) and awarded the StudyWeb Academic Excellence award in January 1998. This website contains patient information leaflets in English, Sinhala

and Tamil, a bibliography, a collection of essays, a multiple choice question bank, a hypertext guide to basic medical genetics, and information about the Human Genetics Unit including its services. In addition to this local content developed by us, links are provided to other high quality genetic websites on the Internet.

## RESULTS

The website recorded a total of 23 373 visits from 1 February 1997 to 20 November 1998. Of them 222 made entries in the guest book and 12 sent email inquiries to the webmaster. Three entries in the guest book, which were probably made with foreign language web browsers could not be understood and were not considered for analysis. The rest (231) were analysed to find out why they visited the site (eg: looking for information about a disease), why the entry/inquiry was made (eg: to thank for information provided, request further information), their identity, and their country of origin.

Most entries/inquiries (51.1%) did not state why they visited the site ([Table 1](#)). Of the ones that did, those looking for information to help with their studies (16.4%), those looking for disorder specific information (12.1%) and those looking for general genetic information (8.7%) were the most likely people to visit the site. Those who were looking for collaborators come fourth in the list (4.3%), highlighting the value of the Internet as a meeting place for researchers.

The most likely reason ([Table 2](#)) to make an entry/inquiry was to make a positive comment about the website (56.3%) followed by those requesting information (16.5%) and those making general comments about the website (10.8%). Only 2 people made negative comments. The relatively high number (8.7%) of meaningless or offensive entries in the guest book may be an indication of the misuse of the freedom enjoyed by web surfers.

Ninety one (39.4%) of the entries/inquires were not informative enough to find out who the visitors were ([Table 3](#)). Students and teachers (33.3%) were the most likely people to visit the site. While health care providers such as doctors and geneticists came next (13.8%) followed by patients and their relatives (3.4%).

Entire/inquires came from 24 countries ([Table 4](#)). The majority was from the USA (62.8%), the United Kingdom (6.9%) and Canada (5.6%). Visitors from these three countries accounted for 75.3% of the total. There were only 21 (9.1%) visitors from Sri Lanka. They constituted the major group among the developing countries whose total, which formed only 13.4%.

## DISCUSSION

The most striking feature of this data is the small numbers of users of the website from Sri Lanka and other developing countries. The main users of the information at this website seem to be the academic community, mainly students, of North America. Sri Lankans who uses the site were mainly doctors.

The restricted availability of computers and the prohibitive cost of Internet and telecommunication services are likely to be the main factors contributing to the developing countries lagging behind. Making these facilities available widely and economically to our people beginning with the academic community is an urgent need if we are to keep abreast with “cyber-medicine” in the next decade.

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**Table 1. The reasons for visiting the website**

<b>Reason</b>	<b>Number (%)</b>
To find help for studies	38 (16.4)
To find disorder specific information	28 (12.1)
To find general genetics information	20 (8.7)
Look for collaborations	10 (4.3)
Other	17 (7.4)
Not known	118 (51.1)

**Table 2. The reason for making the entry/inquiry**

<b>Reason</b>	<b>Number* (%)</b>
To make positive comments about the website	130 (56.3)
To request information	38 (16.5)
To make a general comments about the website	25 (10.8)
To make a meaningless/offensive remark	20 (8.7)
To make an inquiry for collaboration	10 (4.3)
To make suggestions for improvement of the website	8 (3.5)
To request permission to use the MCQs	4 (1.7)
To offer help	3 (1.3)
To make negative comments about the website	2 (0.9)
To report technical difficulties of accessing the website	2 (0.9)

\* The total number is more than 231 because there was more than one reason for making some of the entries/inquires.

**Table 3. The Identity of the visitors**

<b>Identity</b>	<b>Number* (%)</b>
Secondary school student	47 (20.3)
Sri Lankans living abroad	27 (11.7)
Doctors	25 (10.8)
University students	21 (9.1)
Geneticists	7 (3.0)
Information technology professionals	7 (3.0)
University Teachers	9 (3.9)
Biotechnological/Pharmaceutical industry	4 (1.7)
Patients and Relatives	8 (3.4)
Others	5 (2.2)
Not Known	91 (39.4)

\* The total number is more than 231 because there was more than one reason for making some of the entries/inquires.

**Table 4. The country of origin of the visitors**

<b>Country</b>	<b>Number (%)</b>
USA	145 (62.8)
Sri Lanka	21 (9.1)
UK	16 (6.9)
Canada	13 (5.6)
Others *	36 (15.6)

\* These visitors were from: Australia (3), Bahrain (1), Brazil (1), Chile (1), Germany (1), India (2), Italy (2), Japan (3), Malaysia (1), Mexico (1), Netherlands (1), New Zealand (2), Norway (1), Pakistan (1), Peru (1), Philippines (1), Singapore (1), Sweden (2), Venezuela (1), Yugoslavia (1), Unknown (8).