Sources of Information in General Physicians

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Abstract

Background and purpose: *The rapidly increasing availability of information has coincided with fundamental change in the structure and delivery of care. This study is an attempt to determine sources of information which general physicians use.*

Methods*: with a cross-sectional study a 150 general physicians were selected by simple random sampling.*

A 20-item questionnaire was designed and distributed to collect data regarding the sources of information physicians used and the time they spent for getting relevant data. Analysis was descriptive. The SPSS(version 12) software was used for data analysis.

Results: *Most participants (49/3%) were 25-34 years and 42/7% of them worked less than 5 years. Of all participants, 44/7% studied less than 1 hour in day and 70.3% of them studied less than 2 paper in a month. The subjects most frequently deemed as most needed by physicians in an descending order were treatment (61.9%), diagnosis (55.6%), side effects (30.3%), prevention (29.2%). The most frequently used sources were textbooks (67/6%) and 36/2% of physicians said that CME seminars was not effective.*

Conclusion: *It seems that there is a serious need to encourage physician spend more time on more reliable sources of information.*

Key words: *MEDICAL INFORMATION, GENERAL PHYSICIANS, SOURCE OF STUDY.*

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Introduction

Rapid growth of medical information has made it increasingly difficult for physicians to stay abreast of current medical knowledge. This growth of medical information is evident in the proliferation of subspecialty journals, the growing presence of clinical-economic studies and the escalating marketing efforts of a range of players. The rapidly increasing availability of information has coincided with fundamental change in the structure and delivery of care.

The medical community also stands poised for a major revolution in the way medical information is organized and disseminated. Electronic sources of information (medical outcomes software, access services, the internet and CD-ROM educational materials) are growing in number and popularity.

Electronic information sources promise administrative simplification and ease of access to information, although in many of their current forms, they also contribute to physicians information overload.

The literature on source of information shows that physicians are receiving information from more varied sources than ever before.

Journals continue to be an important source of information, but suffer from speed of use and accessibility limitations. Electronic sources are

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often available more rapidly but are currently not considered as dependable as journals .Although the field of medical informatics has advanced substantially over the last decade, the integration of patient information, clinical guidelines, expert medical systems and administrative information is a critical concept still in its infancy(1).

Analysis of the use of information sources by family physicians showed that they used colleagues often as information sources followed by journals and books. Several factors influenced the use of information sources by family physicians including the physical, functional and intellectual accessibility of the source, the physician's age, and participation by the physician in research or education, the social context of the physician's practice and stage of the information gathering process. (2)

Given the importance of sources of information, we studied the sources of information that our physicians generally used and their information seeking behaviors.

Methods

The study population consisted of general physicians who work in private sector in Qazvin. A 20-item anonymous questionnaire was designed and used to collect data for the study. The questionnaire included demographic profile, computer literacy, use of computer and internet, participation in education program, use of papers, satisfaction of continuing medical education, accessibility to computer and internet, source of information and their background of problems.

With simple random sampling, 150 general physicians were selected and

A questionnaire delivered to all. The questionnaire was reviewed for completeness. Analysis was descriptive. The SPSS (version 13) software, was used for data analysis.

Results

Most participant (49/3%) were 25-34 years. Table1 shows the participants distribution by age and sex.

Of all respondent, 64(42/7%) had a work experience less than 5 years; 54 (36%) worked for 5-10 years and 32 (21.3) had a work experience of more than 10 years.

Of all participants 67 (44.7%) studied less than 1 hour. Table 2 shows the frequency distribution of time dedicated to study by respondents according to sex and age.

Of all physicians participating in our survey 139 (92/7%) and 128 (85/3%) have access to computer and internet service, respectively but 87/3% of them use computer.

70/3% of physicians studied less than 2 papers during a month.

The subjects most frequently deemed as needed by physicians in an descending order were treatment (61.9%), diagnosis (55.6%), side effects (30.3%), prevention (29.2%), etiology (28.3%), screening (8%), epidemiology(7.4%).

The most frequent source used by physicians was textbooks (67.6%) followed by internet (42.3%), special physicians (35.7%), colleagues (32.1%), medical journals (25.5%), and CME seminars (12.2%).

Considering the CME effectiveness, 36.2% of the physicians believed that it was not effective, 47.2% found it moderately effective, and 16.6% stated that it is highly effective.

Table 1. Frequency distribution of participants by age and sex

Age	Sex		
	male	female	total
25-34	38(51/4%)	36(48/6%)	74(100)
35-44	42(65/6%)	22(34/4%)	64
>44	8(66/7%)	4(33/3%)	12

Discussion

Information has the most important role in medical and educational activity. Today we are witnessing an information explosion, therefore continuing medical education (CME) has critical role.

In spite of this fact, 44% of general physicians study less than 1 hour per day. In addition, 70/3% of them study less than 2 papers in month.

Table 2.The frequency distribution of time dedicated to study by physicians by sex and age

age	Time for study (men)				Time for study (women)			
	<1	1-3	3-5	>5	<1	1-3	3-5	>5
25-34	14	16	7	1	16	13	6	36
35-44	17	22	2	1	13	7	1	22
>44	5	2	1	0	2	1	1	4

Table 3. Frequency distribution of papers studied by participant each month by sex and age

age	Papers studied (men)				Papers studied (women)			
	<2	2-5	5-10	>10	<2	2-5	5-10	>10
25-34	27	7	1	1	30	5	0	1
35-44	25	10	4	3	14	6	2	0
>44	5	1	0	2	3	1	0	0

The speed of change and turnover in medical information is very high; therefore these results are far from what is expected. Analysis of the use of information sources in this study showed that most participants used text books as the most frequent information source followed by special physician (35/7%) and
colleagues (32/1%) which is different from a study by Verhoeven (2). Information in text books often is not up to date. Duration between production and use of books is very long (3). In other words a treatment approach, in spite of the fact that is not effective, may be used for a long time (4).
In Herman study the most important information sources was colleagues followed by textbooks (5).
In our study satisfaction with CME seminars was low. The reason for this could be the presentation of out-dated material.
In our study 85/3% of physicians used internet. Several studies have explored the use of the internet to obtain clinical information. For patient care, for example a 2004 study of resident physicians adaptation technology in Pennsylvania, USA, showed that 98% of the respondents used the internet.(6)
Similar studies from USA also reported that physicians used the internet for patient care. (7,8)
Finding from New Zealand studies showed that a greater proportion of
General practitioners have access to the internet (9,10).
The use of the internet for professional development is growing rapidly. Access to on-line continuing medical education must be immediate, relevant, credible and easy to use.
In our study the physicians most frequently sought information for treatment and diagnosis, which must be done with outmost care and through a scientific approach. Evidence-based medicine (EBM) is about solving clinical problems. It is an approach to clinical decision marking, emphasizes data instead of opinion. EBM relies on identifying and reviewing the best and most relevant literature to determine the value of diagnosis, test or treatment; because of this, EBM provides a powerful tool for making decisions for patients but usually requires an active search for best available evidence (11).
EBM differs from traditional medical practice because it acknowledges
that clinical experience and pathophysiologic rationales are insufficient for clinical decision making and examination of evidence from clinical research is needed.(12)
It seems that there is a serious need to encourage physician spend more time on more reliable

sources of information.

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