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Internet use for information seeking in clinical practice: A cross-sectional survey among French general practitioners

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ABSTRACT

Background: Medical information needs regarding patient care are particularly large for general practitioners (GPs). The Internet seems to be a relevant but underused tool to seek medical information.
Objective: We aimed to describe the characteristics of the French GPs using the Internet for information seeking, to identify the barriers to its use and the factors that could facilitate it.
Method: We conducted a cross-sectional survey among GPs currently practicing in France, using an online questionnaire, in July 2009. We analysed the answers of 721 respondents.
Results: Most of the respondents used the Internet to seek information. They were significantly younger, worked in group practice, had Internet training and had Internet access at the practice. The main barriers were related to the physician (lack of knowledge or specific skills), to the practice conditions (lack of time, concerns about relationship with patient, financial non-recognition) and to the information (information overload, quality concerns, low relevance, language barrier). Practitioners wanted more reliable and more relevant documents for daily practice. Websites with already selected resources could increase the GPs use of the Internet for medical information seeking.
Conclusion: The reported obstacles were largely common with those previously described in other countries, except the language barrier and the financial non-recognition. Even if the generalization of our results to all French GPs should be cautious, the study provided better insights into the obstacles to the Internet use to seek clinical information in family practice and the factors that could facilitate it.

1. Introduction

1.1. Clinical information needs in family practice

Physicians are not "all-knowing". Biomedical knowledge doubles about every 20 years [1]. To practice a high quality medicine, physicians have to constantly update their knowledge and find the information they need to integrate the best evidence in their clinical decisions [2]. The average number of clinical questions facing the general practitioner (GP) is between 0.07 and 1.85 per consultation [3]. In the broad scope of family practice, problems encountered and questions arising are particularly wide-ranging. Clinical information

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needs are larger for GPs than for colleagues in other specialties [4].

1.2. Internet use for clinical information search: a relevant and underused tool

The Web has the characteristics of an ideal source of medical knowledge [5] and the Internet seems to be a relevant tool for information regarding patient care. It is hoped it could help doctors by providing them with the helpful information as they see a patient [6,7]. Physicians can use the Internet to solve clinical problems, to support decision-making and to overcome memory limits [8]. The use of online retrieval information systems can help physicians to better answer their clinical questions [9]. Despite an increasing access to Internet, GPs still seem to prefer printed resources, Continuing Medical Education (CME) or contact with their colleagues to answer the questions arising in their clinical practice [3,10,11]. GPs usually believe information in medical journals to be more reliable than information published on the Web [12].

1.3. Many obstacles and some facilitating factors

Time constraints are commonly reported in literature. GPs only seek answers to between 30% and 57% of their clinical questions [3] and they spend, on average, less than 2 min seeking answers [13]. Many obstacles are related to information seeking [14]. The skills to perform a literature search are often limited or lacking and most of the GPs are unfamiliar with using online tools. Information overload is a barrier to using the Internet in daily practice [4]. Web-based information is heterogeneous in quality, and not always fit to a direct use for practice [15]. Age, gender, and practice type or location can impact Internet use, but are not always taken into account in literature. Immediacy of access to information is an important and helpful aspect [16]. Computer availability when consulting was a predictive factor to Internet access at work [17]. Training needs are frequently reported in literature [18] and could facilitate the practitioners' use of the Internet. Learning about how to use the Internet and experiencing its benefits could increase its use by GPs [19]. Websites or portals with relevant information or selected links could guide clinicians in the Web-based resources [12].

1.4. Aims of the study

The aims of our study were to describe the characteristics of the French GPs using the Internet for clinical information search to identify the barriers to this Internet use and the factors that could facilitate it.

2. Method

We conducted a cross-sectional survey among French GPs, using an online self-administered questionnaire. The study protocol was approved by the Ethics Committee of the French Society of General Medicine.

2.1. Questionnaire design

We designed a questionnaire that contained 20 questions, based on the factors identified in the published literature. Questions were spread on three screens corresponding to three parts: (i) demographic characteristics: gender, age, department, practice location ("urban", "semi-rural", "rural" area), group/solo practice, average number of patients seen per week ("<80", "80–120", "120+") and Electronic Health Record (EHR) use; (ii) sources of medical information used in clinical practice (including "books and printed journals", "CME, congress and seminar", "Web/Internet", "printed guidelines", "electronic documents (offline)", "colleagues", "informal documents" and "medical representative") and physician's preference (on a scale from 1 "most preferred" to 8 "least preferred"); (iii) Internet access in consultation room, competencies to use the Internet for information seeking (from "good" to "insufficient"), Internet training, obstacles and facilitating factors (using multiple choice questions). Although we did not identify language barrier in our literature review, we wanted to evaluate it as a potential obstacle. Eight questions were mandatory (gender, age, practice location, information sources used, resources rank according to the preference, Internet obstacles and facilitating factors) and all questions except one were closed. The last question was open: "What do you think about the Internet use for information regarding patient care?". The creation of the online questionnaire and technical infrastructure for conducting the survey was provided by "It's Sauquet.com" (Paris, France).

2.2. Survey design

Data were collected during two weeks, in July 2009. We used three different channels to invite GPs to answer the online questionnaire. An email was sent to the mailing list of the French Society of General Medicine and was followed by an email reminder one week later. An announcement was published in the Egora physician newsletters (edited by Global Media Health, a French medical editor) and posted in the discussion forum of the National College of Teachers in General practice. The exact number of physicians invited (email, newsletter, forum) to participate the study was unknown. The physician participation was voluntary and uncompensated. Accepting to participate in the study by responding to the questionnaire implied consent.

2.3. Sample

The GPs surveyed in the study were not randomised: the respondents constituted a convenience sample. We used a simple inclusion criterion: to be a general practitioner currently practicing in France. The GPs practicing in another country, physicians from other specialities, retired physicians, trainees or students were not included. We secured that only practicing GPs from France were included by mentioning it explicitly in the invitation email and by requiring the department of exercise.