

Clinical Communications

Use of the Internet by patients attending allergy clinics and its potential as a tool that better meets patients' needs

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Clinical Implications

- Patients attending allergy consultations also use the Internet as a complement to dig deeply into their disease and resolve unmet needs. Allergists should increase our presence on the Web, using a compressible language and encouraging the empowerment of patients.

TO THE EDITOR:

Access to information through the Internet is increasingly common, and health care does not escape this trend. Health consumers rely on digital information to learn about or increase their knowledge of their illness. A previous report about interest in respiratory allergy on the Internet revealed that most searches were made by allergic patients in Spain.¹ In addition, education and access to high-quality medical information can enhance the way patients view their illness,² and medical care improves when consultants provide patients with the necessary tools to participate in the management of their illness.³ Because the Internet is completely open and medical information available without quality control, patients should be empowered so that they can make appropriate health-related decisions and access proven online medical information.¹⁻⁵ We present the results of a survey on the use of Internet by patients attending allergy clinics.

Between November 2016 and January 2017, physicians asked 304 consecutive patients attending our pediatric and adult allergy clinic at a university hospital (adult patients and the parents of pediatric patients) to complete a printed survey, typed in Spanish. They did so at the end of their visit (first or successive). The survey was anonymous and voluntary—only 4 patients declined to complete it—and had been approved by the Ethics

Committee of Ramón y Cajal Hospital. All the patients included (parents in pediatric cases) gave their informed consent to participate. Patients were asked about the following: (1) demographic data, namely, age, sex, educational level (university, high school, elementary school, or none), and main reason for consulting (respiratory allergy, food allergy, drug allergy, or other); (2) availability of Internet and/or smartphones at home and whether they search for information about allergy before and/or after a medical visit; (3) Web sites visited (blogs, forums, and/or testimonials, allergy Web sites, nonspecialized Web sites, and social networks), content sought, and reasons for the search (gain more in-depth knowledge of the illness, explanations in simpler language, additional information, ie, to expand on the information provided at the visit, possibly as a result of insufficient time with the physician, doubts about the information received, and lack of trust in the physician); (4) need for digital tools (social networks, official allergy Web sites) or educational sessions and what they would ask from an ideal allergy Web site (advice, educational interventions, or a channel to resolve common doubts). With the exception of demographic data, the participants could choose more than 1 response in their answers. They all completed the survey in 5 to 10 minutes. Categorical variables were analyzed with the chi-square test, using the STATA 2014 version (StataCorp LLC, College Station, Texas).

A total of 300 surveys were collected. Baseline characteristics of the population are described in Table 1. Females accounted for 62% of the adults and 75% of the parents of children. A total of 126 of the 300 surveys were collected from patients attending the clinic for the first time, and the remaining 174 were from successive visits. With regard to educational level (parents of the pediatric patients are also included in this group because they completed the questionnaires), 91% had university or technical degrees, 9% had attended high school only, and less than 1% had completed primary education only. Most participants (97%) had Internet at home, and 89% had smartphones. Nearly half of the participants searched for information on allergy before consulting (53%) and afterward (47%). The parents of pediatric patients were significantly more likely than adult patients to search for information related to allergy before consultation (60% *vs* 47%, respectively; *P* < .05). No statistically significant differences were found in the reason for consultation or in the reason for the search between

TABLE 1. Baseline characteristics of the population

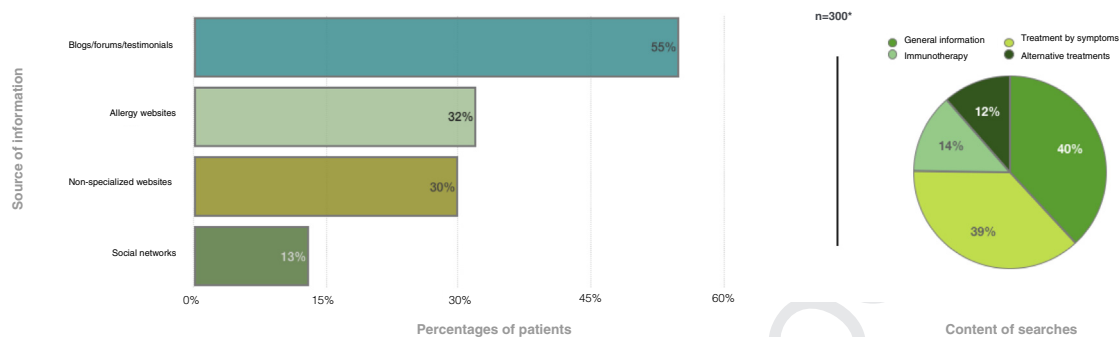
Characteristic	Adults (n = 139)		Children (n = 161)	
			Patients	Parents*
Age (y), mean (range)	39 (15-81)		5 (0-14)	42 (19-63)
Female, n (%)	86 (62)		66 (41)	121 (75)
Visit† and main complaint, n (%)	First visit	Successive	First visit‡	Successive‡
Respiratory allergy	19 (14)	81 (58)	36 (22)	48 (30)
Food allergy	12 (10)	18 (13)	46 (29)	26 (16)
Drug allergy	4 (3)	4 (3)	0 (0)	3 (2)
Other	12 (9)	10 (7)	8 (5)	4 (3)

*The parents of pediatric patients completed the survey on their behalf, and parental demographic characteristics are also provided.

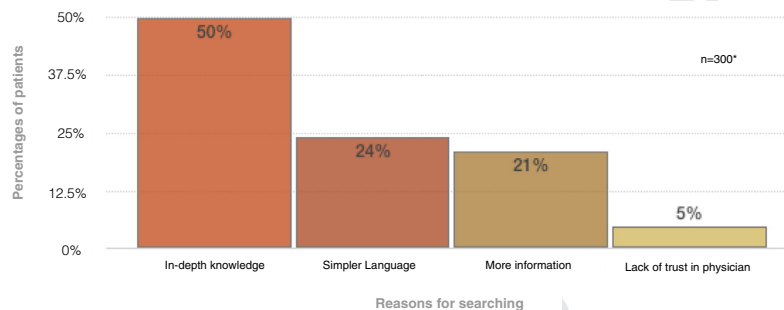
†The patients completed a printed survey at the end of their visit to the clinic (first or successive) and could choose more than 1 response in their answers. Their reason for visit did not always match with the topic of Internet search (see detailed information in Figure 1, A).

‡This variable relates only to patients, not to their parents.

A



B



C

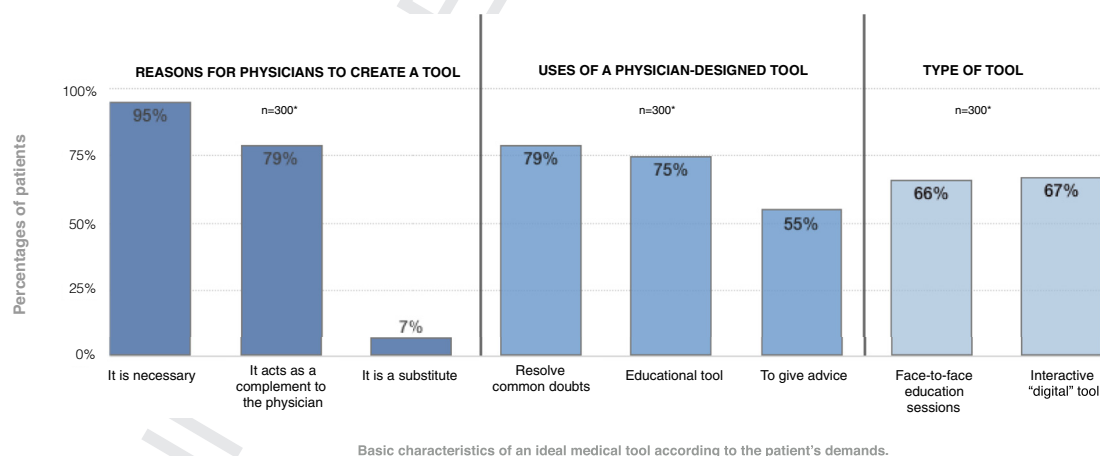


FIGURE 1. B, Source of information and content of searches. C, Reason for searching for allergy information on the Internet. D, Basic characteristics of an ideal medical tool according to the patient's demands: (1) Reasons for creating a tool. (2) Uses for this tool. (3) Type of tool. *The participants could choose more than 1 response in their answers.

adults and children. Similarly, significant differences were not found for the remaining demographic data, the use of the Internet depending on the device used, or the age of the parents, with the exception of a higher number of searches (first or successive visits)

by university-educated participants than by those with other educational levels (51% *vs* 15%, respectively; $P < .05$).

The main sources of information and the content of the searches are depicted in Figure 1, A. The reasons for searching

the Internet and their expectations of a physician-designed tool are summarized in Figure 1, B and C, respectively.

The use of the Internet has modified many daily activities and habits and enables users to interact with others or to change Web site content. In our setting, an allergist sees about 3,000 patients a year, while each patient has currently around 250,000 health-related Web applications available and thousands of Web sites from which to obtain medical information. It has been widely demonstrated that knowledge of a disease empowers patients to make better decisions with respect to their illness.^{3,5-7} Furthermore, patients with chronic allergic conditions are more able to learn about and recognize severe symptoms and treat them quickly and appropriately before a life-threatening situation develops.² Empowerment requires training, as well as an understanding of and deep involvement in the management of the illness. Therefore, this ability must be built on a solid foundation of previous knowledge.

Our study shows that, in addition to increasing interest in respiratory allergy in Spain,¹ patients attending our allergy clinics (especially those with a higher educational level) use the Internet as a complement to gain more in-depth knowledge of their disease and resolve unmet needs. Searches are made mainly through blogs and/or testimonials using colloquial and understandable language, especially by parents of allergic children. In addition to the Internet, patients would like to have a virtual medical tool with useful and sound information that they can apply to clarify and resolve their doubts. As physicians, we should increase our presence on the Web and take advantage of such a helpful tool that could bring about important benefits in daily clinical practice and strengthen the doctor-patient relationship. Patient empowerment and the use of understandable language are necessary.

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Conflicts of interest: The authors declare that they have no relevant conflicts of interest.

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