

*Using the Internet to search for information on health and illnesses
by people suffering from respiratory allergies and asthma*

SUMMARY

Introduction: Medical awareness in patients, particularly those with chronic diseases, is increasingly being shaped by information published in virtual media. In Poland, the Internet remains the most common source of health information. The results of public opinion polls show that 88% of Internet users turn to health portals when they need to find information on health or illnesses. Physicians and representatives of the health care system came in second in this respect (73%).

Objective: The main objective of this thesis is to evaluate the phenomenon of using the Internet to search for health information by chronically ill patients undergoing treatment, using the example of respiratory diseases and/or asthma.

Methodology: This thesis is based on four independent studies regarding the discussed issue. The order of presentation of these studies is conditioned by the accuracy of the scope of a given issue.

The first study was conducted using a qualitative research technique of individual in-depth interviews (n = 20, aged 20–44 years).

The second study was a questionnaire-based survey. The target group (n = 1720) included inhabitants of the Masovian voivodeship aged 20-44 years.

The third study was a comparative analysis of two independent structured interviews: the first (Study A) was carried out in the Masovian voivodeship with a target group of people aged 20-44 years (n = 1720). To conduct this analysis, 51 respondents were randomly drawn (simple sampling in age and gender sub-groups). The gender and age structure corresponded with the study group from the second interview (Study B) that had been carried out at the Allergy Outpatient Clinic of the Independent Public Central Clinical Hospital at Banacha Street in

Warsaw. The target group included patients with asthma and respiratory allergies scheduled for follow-up visits to allergists, and/or patients undergoing skin tests or desensitisation (n = 59).

The fourth study was carried out using the results obtained from the Epidemiology of Allergic Diseases in Poland project [ECAP – Epidemiologia Chorób Alergicznych w Polsce, www.ecap.pl]. The questionnaire study was completed within the outpatient part. The analysis included answers to questions regarding alternative medicine, provided by 4671 respondents aged 20-44 years.

Statistical analysis in the qualitative studies was carried out with Pearson's chi-square tests where $p < 0.05$ was considered statistically relevant.

Results: In the qualitative study, the main reasons for using the Internet to look for health information were: curiosity, fear about disease, willingness to gain knowledge, as well as broad and quick access to the Internet. Respondents searched for this information particularly when they did not understand medical terms used by a physician, or when a recommended treatment was ineffective. One in five respondents admitted that the information they had found on the Internet helped them diagnose a disease in themselves or their loved ones, which was later confirmed by a specialist.

The questionnaire-based survey conducted among 1720 inhabitants of the Masovian voivodeship showed a statistically significant dependence between the frequency of using the Internet to find information on health or diseases, and the occurrence of an allergy or respiratory allergic diseases (respectively: $p < 0.001$ and $p < 0.01$). Respondents with asthma diagnosed by a physician seldom used the Internet to look for reviews of health facilities compared to those declaring asthma not confirmed by a doctor ($p < 0.05$). The latter group turned to the Internet to seek health information for themselves or members of their families more often than those with asthma confirmed by a physician ($p < 0.05$). Women were more likely to use the Internet to look for information about health or diseases than men ($p < 0.001$).

The comparative study of behaviours in people suffering from respiratory allergies and/or asthma, and in the general population, showed that 97% of people with allergies and/or asthma had declared using the Internet to search for information about health, health care and medical services, compared to over 92% in the general population (NS). In both groups, more than 74% of respondents sought information about a particular disease on the Internet ($p > 0.05$). 33% of respondents suffering from an allergy and/or asthma, and 20% of the general population looked for information on how other people cope with similar health problems ($p > 0.05$). 51% and

40% of people respectively found information about different treatment methods for a given illness on the Internet ($p > 0.05$). In both groups, every second respondent often went online to seek health information when they felt bad or were ill. 42% of respondents with an allergy and/or asthma and 35% of the general population stated that most health information published on the Internet for them was unreliable ($p > 0.05$). 79% of respondents with an allergy and/or asthma and 60% of the general population verified physician diagnoses on the Internet, while nearly 10% of respondents in each of the two groups visited specialists in alternative medicines (e.g. Chinese medicine, herbal medicine) ($p < 0.05$).

The ECAP study (questionnaire part) showed a statistically significant dependence between using alternative medicine and declaring allergy symptoms ($p < 0.001$). No statistically significant dependence within using alternative medicine was observed in the group of people with any form of physician diagnosed asthma or allergic rhinitis (RA).

Conclusions:

1. Allergy symptoms were related to the frequency of using the Internet to look for information about health problems, either of the respondents or a family member, and for health care and medical services.
2. People with asthma confirmed by a doctor seldomly turned to the Internet to seek reviews of health facilities than those declaring asthma not confirmed by a doctor.
3. People declaring asthma (not confirmed by a doctor) look for information about health and diseases on the Internet more often than those with asthma confirmed by a physician.
4. Women, and people with a low economic status, were more likely to seek medical information on the Internet.
5. The number of people using the Internet for health purposes was very high both among the general population and the group of chronically ill patients.
6. Both in the general population and in the group of people suffering from an allergy and/or asthma there was a conviction that most health information on the Internet was not reliable.
7. In both study groups, the most common reasons for seeking health information on the Internet included: reading a review of a physician a respondent is going to visit, as well as self-treatment due to malaise, disease or disorder.
8. In both study groups, the respondents most often turned to the Internet to search for information about a particular disease, different treatment methods of a given disease, a particular medicine, as well as reviews of physician.

9. In both study groups the respondents most often verified physician diagnoses and instructions with their friends. People suffering from an allergy and/or asthma were more likely to verify physician diagnoses on the Internet than those who did not report having these disorders.
10. In the group of people with an allergy and/or asthma every third person declared that they used social networking sites to find additional information on a particular disease and/or treatment, while every eighth respondent admitted to sharing their health and treatment experiences online.
11. The study showed a significant dependence between the symptoms of allergic diseases and asthma declared by patients, and the higher frequency of using alternative medicine.
12. Clinical diagnosis of an allergic illness or asthma did not have an impact on the frequency of using alternative medicine.
13. Women were more likely to use alternative medicine. Besides, in this group of respondents there was an additional dependence between greater age and using alternative medicine.
14. There was some correlation between seeking health information on the Internet and looking for alternative treatment methods. People suffering from a respiratory allergy and/or asthma verified information from the physician either on the Internet or at specialists in the field of alternative treatment. They also used the Internet to search for information on alternative treatment, which implies that online information can result in modifying a treatment process by a patient.
15. It is necessary to develop new solutions and standards to ensure high quality and reliability of health information available on the Internet, for example, professional portals with reviewed texts that, like an encyclopaedia, provide Internet users with validated information about a problem they are interested in.