The Rise of Interactive Health Websites

Christopher Sciamanna, MD, MPH*

* Thomas Jefferson University

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In 2003 a survey from the Pew Internet and American Life Project noted that about 80% of adult Internet users in the United States have searched for health and medical information and 63% have searched for information about a "specific disease or medical problem."[1] Given the sheer number of people with access to health information online, the Internet has tremendous potential to transform the way that patients interact with physicians. In an hour or two online, intelligent patients can learn enough about their condition to raise a question or two that may stump even their doctor. Of course, there are problems with medical information on the Internet: The reading level is too high,[2] there is some bad information out there and many Americans don't have access. Those problems aside, it is no less than a revolutionary force in medicine.

Here at Jefferson and at other universities, researchers are trying to understand how to harness the power of the Internet to improve health care. It may be nice to learn more about your diabetes, but does it make a difference? There have been only a few studies that show that medical information on the Internet, or use of a specific website, makes an important difference. The first generation of medical websites were essentially online libraries, the Internet equivalent of flipping pages in a massive book. Lately, more interactive websites have been developed to improve doctor-patient communication and improve the quality of patient care. Researchers at the University of North Carolina have developed a website called "Heart to Heart" (www.med-decisions.com), which allows patients or physicians to enter cardiac risk data, based on the Framingham index, and get personalized information such as the risk of a cardiac event over the next decade and personalized suggestions for what can be done to lower that risk, such as taking aspirin.[3]

One project that researchers in the Department of Health Policy are working on to improve doctor-patient communications is www.myexpertdoctor.com. The website, which has been supported by a series of grants from the National Institutes of Health, helps patients ask questions that are personalized to their particular condition and situation. Before a doctor visit, patients go online and answer 10 to 20 questions about their health and healthcare. The site then gives immediate personalized feedback and information including a list of questions to ask their doctor. The feedback is based on the latest research and a team of medical experts.

Myexpertdoctor covers preventive health care and a wide variety of health conditions, including asthma, headaches, arthritis, high blood pressure, heart disease and weight problems. The project is based on the observation that patients generally get tests and treatments that they request.[4] This is the mechanism by which direct-to-consumer advertising works. Instead of getting patients to ask for prescription drugs such as Viagra, for example, this project will try to get consumers with persistent asthma to ask for an inhaled corticosteroid and other tests and treatments that happen less than optimally.[5]

Developed with medical content experts, the questions and feedback use published guidelines in order to evaluate the care patients receive. For example, the hypertension questions and feedback are based on the most recent NIH blood pressure guidelines, the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC7).

Patients who use the site fill out a brief survey about their health, the medications they take, and the care they've received in the past. Based on their answers and myexpertdoctor's medical database, patients receive personalized feedback about their health and a list of questions to ask their doctor on their next visit. Based on the guidelines and a brief online survey, patients at risk for heart disease might be encouraged to ask their doctor, "Would I benefit from taking a beta-blocker?" Someone who suffers from asthma may be prompted to ask, "Would a steroid inhaler help my asthma symptoms?"

Several important research questions need to be answered about websites such as myexpertdoctor.com, including 1) Do patients who use these websites get better care? 2) Could using websites such as these help or harm the doctor-patient relationship? and 3) Can patients be urged to ask specific questions to their doctor, which may be uncomfortable for patients? In preliminary studies with over 300 patients and 80 physicians, the website has been well received. Our plan over the next year is to begin testing the ability of the website to improve the quality of outpatient care for hypertension, an important area of focus of the Jefferson University Physicians Clinical Care Committee.

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About the Author

Christopher Sciamanna, MD, MPH, is an Assistant Professor in the Department of Health Policy at Jefferson Medical College, Thomas Jefferson University. Please address questions and comments to chris.sciamanna@jefferson.edu.