Acne and the Internet

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KEYWORDS

- Acne • Internet • Google • Website • Patient education

KEY POINTS

- Patients commonly search for medical information, particularly about acne, on the Internet.
- Although there is much useful information about acne on the Internet, there is also a lot of misinformation and promotional information masquerading as education.
- Providers must be aware of reliable Internet resources so they can refer interested patients for more information on acne or other disease states.

INTRODUCTION

The Internet has emerged as the primary resource for almost all daily activities, ranging from shopping to education. In the health care space, online information continues to increase. One study from 2012 showed that 70% of adults used the Internet as their initial source of health information.[1] Adolescents especially have been found to prefer seeking out health care information from the Internet. In fact, that may be the adolescent patient's only source of health information.[2] The Internet provides users with access to disease-specific symptoms and treatments, the ability to connect with others for advice and support, and knowledge of up-to-date research, breakthroughs, and clinical trials. Although Internet access is widely available, there is much miseducation as not everything published online is reliable. The Internet affects the doctor–patient relationship, because many patients come to the office armed with what may or may not be correct information. The doctor must be aware of this when engaging patients. Treatment recommendations should include not only prescription therapies, but also referrals to reliable online resources for interested patients.

Acne vulgaris affects an estimated 40 million Americans each year, the majority of whom are adolescents and teenagers.[3] Given this younger, Internet-savvy demographic, it is not surprising that many patients are using the web as a source for information on acne. Since 2008, Internet searches for the keyword "acne" have continued to increase and are greater than that of other skin diseases. Interestingly, search volume for the term "acne" peaks over the weekend, with a relative lull during the week. It is thought that this trend is attributable to younger people being busy with school during the week and having more free time during the weekends.[4]

The Global Burden of Disease 2010 project evaluated the impact of 291 diseases, including those of the skin, on quality of life.[5] It has been shown that the volume of disease search terms on Google strongly correlates to the burden of the disease according to the Global Burden of Disease 2010 data.[6] Of the 15 skin diseases included in the Global Burden of Disease 2010 data, acne received the highest Internet search interest, followed closely only by herpes.[6] Acne has been shown to affect quality of life as much as other significant, chronic diseases such as severe asthma, epilepsy, and diabetes.[7] Internet search term data reflects this as well. In 2013, the term "acne" was more searched for on Google than even the term "diabetes."[4]

WHAT IS OUT THERE

Acne patients are actively seeking out information online. However, there is no regulation over the quality or accuracy of what they are reading. Available online resources may be broadly divided into

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4 different categories: (1) educational websites from well-respected organizations, (2) promotional websites, (3) independent websites from self-proclaimed experts, and (4) social media websites. It is important to understand the differences between these types of websites, the information they provide, and the potential ramifications they can have on patients and the doctor–patient relationship.

Educational Websites from Well-respected Organizations

Many academic centers, government institutions, professional organizations, and health journals provide publicly available health information. Using the term "acne" in a Google search yields the following sites among the top of search list: The American Academy of Dermatology (AAD), Medline Plus from the US National Library of Medicine, and the National Institute of Arthritis and Musculoskeletal and Skin Diseases, a division of the National Institutes of Health. Some academic centers and hospitals also provide web-based health information. The most popular of these sites include the Mayo Clinic and Johns Hopkins Medicine. Each of these sites provides unbiased, educational information on the causes, clinical presentation, and potential therapies for acne. They can all be considered high-quality, reliable resources for patients (**Table 1**).

The AAD provides extensive public education materials on its own website and should be considered a go-to referral resource for patients. Specifically, it contains a "Derm A to Z" section with well-written articles and a video series that cover skin diseases as well as health and beauty. The public site content is regularly reviewed by the academy's Public Education Committee to ensure that information is medically accurate, up to date, and delivers key messages that dermatologists want their patients and the public to know.

Articles from health and lifestyle magazines are commonly available online in addition to print. Although most of the content of these articles has undergone a fact checking process, it cannot be universally assumed. Many articles feature quotes from board-certified dermatologists, which adds credibility to articles; however, quality varies from 1 publication to another. WebMD is one example of a high-quality magazine that offers education on par with some of the previously mentioned websites.

Promotional Websites

Promotional websites may not be easily identified. What seems at first to be solely an educational resource may in fact be a façade designed to sell an acne or skin care treatment. Professional marketers, salesmen, and website designers purposefully create content or chat boards to engage users, who are ultimately directed to make some sort of purchase. These sites are the online equivalent to paid promotional "advertorials" seen in print magazines. Here, educational content that mimics an unpaid article is created. However, the entire page has a focused, biased direction and is in fact a paid advertisement. Although some useful information may be obtained from sites like this, it is important to understand that the root of the website is based on selling a skin care regimen.

Independent Websites from Self-proclaimed Authorities

Creating a website is as easy as purchasing a domain name and registering with a host server, many of which provide easy-to-use site-building software. Armed with a credit card, a technologically savvy person can create a blog portraying him or herself under any persona and post whatever he or she likes. Although some blogs are quite popular, with thousands of subscribers, popularity does not equal accuracy. Most blogs narrate personal experiences and opinions (positive or negative), which may or may not be based on fact. Some contain useful information, with references to medical literature or consultations with dermatologists. However, others may have undisclosed, ulterior motives. Many independent bloggers may have financial conflicts with products being reviewed. Others may make unsubstantiated,

Table 1 Reliable online acne resources	
AAD: Derm A to Z	www.aad.org/dermatology-a-to-z/diseases-and-treatments/a—d/acne
Medline Plus	www.nlm.nih.gov/medlineplus/acne.html
NIAMS	www.niams.nih.gov/Health_Info/Acne/
Mayo Clinic	www.mayoclinic.org/diseases-conditions/acne/basics/definition/con-20020580
WebMD	www.webmd.com/skin-problems-and-treatments/acne/
E-medicine: Medscape	http://emedicine.medscape.com/article/1069804-overview