

Digital Strategies For Dermatology Patient Education

Rachel Giesey, BA; Eliot Mostow, MD; Jenifer Lloyd, DO

Technology offers new opportunities that can both enhance and challenge the physician-patient relationship, including the ways in which patients are educated. Ensuring dermatology patients are appropriately educated about their conditions can improve clinical care and treatment adherence, increase patient satisfaction, and potentially decrease medical costs. There are various digital methods by which physicians can deliver information to their patients, and while there are benefits and drawbacks to each, many Americans turn to the Internet for health information—a practice that is only predicted to become more prevalent.¹

Dermatologists should strive to keep up with this trend by staying informed about the digital patient education options that are available and which tools they can use to more effectively share their knowledge with patients. Electronic health education has a powerful potential, but it is up to physicians to direct patients to the appropriate resources and education tools that will support their clear understanding of all elements of care.

Effective patient education can transform the role of the patient from passive recipient to active participant in his/her care and subsequently supports the physician-patient relationship. The benefits of patient education are timely and valuable with the new pay-for-performance model instated by the Medicare Access and CHIP Reauthorization Act and the Merit-based Incentive Payment System.² In dermatology, patient education alone can essentially be a management strategy for numerous conditions (eg, identifying which triggers patients with contact dermatitis should avoid). On the other hand, a lack of patient knowledge can result in perceived noncompliance or treatment failure, when in reality there has simply been a communication gap between the physician and the patient. For example, if a patient notices little to no improvement of a fungal infection after applying ketoconazole shampoo 2% to affected

areas and immediately rinsing, this does not necessarily constitute a treatment failure, as the patient should have been educated on the importance of leaving the shampoo on for 5 minutes before rinsing. One study alluded to this communication gap, revealing physicians' tendency to overestimate how effectively they are communicating with their patients.³

Successful patient education ultimately is dependent on both the content provided and the method of delivery. In one survey of 2636 Internet users, 72% of respondents admitted to searching online for health information within the previous year; however, the same survey showed that physicians remain patients' most trusted source of information.⁴ Physicians can use digital education methods to fulfill patient needs by providing them with and directing them to credible up-to-date sources.

Physicians can use electronic medical record (EMR) systems to electronically deliver health information to patients by directly communicating via an online patient portal. Allowing patients to engage with their health care providers electronically has been shown to increase patient satisfaction, promote adherence to preventative and treatment recommendations, improve clinical outcomes, and lower medical costs.⁵ The online portal can provide direct links for patients to digital resources; for example, MedlinePlus Connect (<https://medlineplus.gov/connect/overview.html>) is a free service that connects patients to MedlinePlus, an authoritative, up-to-date health information resource for consumer health information; however, many EMR systems lack quality dermatology content, as there is a greater emphasis on primary care, and patient usage of these online portals also is notoriously low.⁶ Dermatologists can work with EMR vendors to enhance the dermatology content for patient portals, and in some cases, specialty-specific content may be available for an additional fee. Clinicians can make

Ms. Giesey is from the Heritage College of Osteopathic Medicine, Ohio University, Athens. Dr. Mostow is from the Department of Dermatology, Northeast Ohio Medical University, Rootstown. Dr. Lloyd is from the Department of Dermatology, School of Medicine, Case Western Reserve University, Cleveland, Ohio.

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Correspondence: Rachel Giesey, BA (rg958214@ohio.edu).

their patients aware of the online portal and incentivize its use by sending an informational email, including a link on their practice's website, promoting the portal during check-in and check-out at office visits, making tablets or kiosks available in the waiting room for sign-up, hanging posters in the examination rooms, and explaining the portal's useful features during consultations with patients.

Mobile apps have revolutionized the potential for dermatologists to streamline patient education to a large population. In a 2014 review of 365 dermatology mobile apps, 13% were categorized as educational aids, adding to the realm of possibilities for digital patient education. For example, these apps may provide information on specific dermatologic conditions and medications, help users perform skin cancer checks, and provide reminders for when to administer injections for those on biologics. However, a drawback of medical mobile apps is that, to date, the US Food and Drug Administration has not released formal guidelines for their development.

It would be impractical for busy dermatologists to keep up with the credibility of every mobile app available in a growing market, but one solution could be for physicians to stay informed on only the most popular and most reviewed apps to keep in their digital toolbox. In 2014, the most reviewed dermatology app was the Dermatology app, which provided a guide to common dermatologic conditions and included images and a list of symptoms.⁷ To help keep physicians up to date on the most reliable dermatology apps, specialty societies, journal task forces, or interested dermatologists, residents, or medical students could publish updated literature on the most popular and most reviewed dermatology apps for patient education annually or biannually.

A practice's website is a prime place for physicians to direct patients to educational content. Although many dermatology practice websites offer clinical information, the content often is focused on cosmetic procedures or is designed for search engine optimization to support online marketing and therefore may not be helpful to patients trying to understand a specific condition or treatment. Links to trusted resources, such as dermatology journals or medical societies, may be added but also would direct patients away from the practice's website and would not allow physicians to customize the information he or she would like to share with their patients. Dermatologists should consider investing time and money into customizing educational material for their websites so patients can access health information from the source they trust most: their own physician.

Many of these digital options are useful for patients who want to access education material outside of the physician's office, but digital opportunities to enhance point-of-care education also are available. In 2016, the American Academy of Dermatology partnered with ContextMedia:Health with the goal of delivering

important decision enhancement technologies, educational content, and intelligence to patients and dermatologists for use before and during the consultation.⁸ ContextMedia:Health's digital wallboard tablets are an engaging way to visually explain conditions and treatments to patients during the consultation, thus empowering physicians and patients to make decisions together and helping patients to be better advocates of their own health care. The downside is that health care workers must devote time and resources to be trained in using these devices.

The increasing availability of technology for electronic health information can be both beneficial and challenging for dermatologists. Physicians should explore and familiarize themselves with the tools that are available and assess their effectiveness by communicating with patients about their perception and understanding of their conditions. Digital delivery of health information is not meant to replace other methods of patient education but to supplement and reinforce them that which is verbally discussed during the office visit. Electronic health education demonstrates powerful potential, but it is up to the physician to direct patients to the appropriate resources and educational tools that will support a clear understanding of all elements of care.

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