

Utilizing social networks, blogging and YouTube in allergy and immunology practices

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Online social networks are used to connect with friends and family members, and increasingly, to stay up-to-date with the latest news and developments in allergy and immunology. As communication is a central part of healthcare delivery, the utilization of such networking channels in allergy and immunology will continue to grow. There are inherent risks to online social networks related to breaches of patient confidentiality, professionalism and privacy. Malpractice and liability risks should also be considered. There is a paucity of information in the literature on how social network interventions affect patient outcomes. The allergy and immunology community should direct future studies towards investigating how the use of social networks and other technology tools and services can improve patient care.

Online social network is a dedicated website or other application that enables users to communicate with each other. Social networks are used by the majority of people to connect with friends and family members, and increasingly, to stay up-to-date with the latest news and developments in the world around us. The undisputed leader among the social networks is Facebook with 1.44 billion monthly active users, and growing [1]. Twitter appears to have a larger mind share than its membership of 302 million monthly active users would suggest due to its widespread use by news media, celebrities and politicians [2]. LinkedIn has its place as a virtual CV and professional network. Doximity is the largest professional network for US physicians, with >50% of doctors as members [3]. Millions of blog posts are shared on the media channels listed above. YouTube has morphed into a 'how-to' search engine, and many patients look for tutorials and answers to their questions on a variety of health topics. New social media services continue to be launched. As communication is a central part of

healthcare delivery, the use of such networking channels in allergy and immunology will continue to grow.

Social networks

There are multiple current and potential uses for social networks in allergy and immunology practices. Facebook is widely used to familiarize the patient with the office setting and staff, and to release announcements about a specific clinic work hours and events. Most specialty organizations have Facebook pages, and the service is widely used by junior members to set up professional support groups.

Twitter is used to engage patients both by individual allergists and by professional and patient-support organizations. For example, the #Allergyready Twitter chat hosted by the American Academy of Allergy, Asthma, and Immunology (AAAAI) and the magazine Allergic Living on 26 March 2015 reached over 1 million accounts and made 6,837,407 impressions during the hour-long discussion [4]. The AAAAI concluded that social media continues to

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be a very successful tool to promote the practice of allergy and immunology. Twitter is widely used by allergists and immunologists to share the latest news and journal articles, and many individual physician accounts have thousands of followers. The allergists' use of Twitter increased by 470% between 2011 and 2012 [5]. Professional use of Twitter peaks during the annual meetings of AAAAI, American College of Allergy, Asthma, and Immunology, European Academy of Allergy and Clinical Immunology, and World Allergy Organization. For example, 25 allergists expanded the educational reach of the 2012 AAAAI annual meeting to 250,000 individuals [6]. This 'tweeting the meeting' activity is officially supported by the professional organizations by promoting a hashtag, specific to each meeting, for example, #AAAAI15, for the 2015 annual meeting of the AAAAI, inclusion in printed and online materials and social media channels. Physicians who are not able to attend the major scientific meetings in person can stay up-to-date with the latest developments by following the hashtag stream from each meeting. The general public is engaged on a regular basis by launching regular Twitter chats and campaigns by professional organizations and individual allergists. Allergy and Immunology was the first specialty to launch a Twitter Journal Club in 2008 [7]; an approach that was subsequently adopted by many other specialties as a global initiative [8]. Although Twitter is the smaller social network relative to Facebook, it is successfully punching above its weight in terms of utilization by allergy and immunology practices.

The use of other social networks is also growing. LinkedIn is used for professional discussions among allergists on a variety of topics, for example, electronic medical records (EMR), with specific sub-groups being formed depending on the topic. The Allergy and Immunology Interest Group at University of Chicago used Google+ and shared online spreadsheet for cloud-based services for scholarly collaboration. The group recruited 18 members and produced >70 posts on Google+, 10 research projects, 10 abstracts, 5 articles and 7 allergy/immunology fellows [9].

Blogging

While Facebook, Twitter and other social networks provide outlets for short-form messages, blogging has its advantages with longer-form writing and a more permanent format and web address. Many allergists and professional organizations use blog posts to highlight a specific issue or news event for more in-depth commentary. For example, the Journal of Allergy and Clinical Immunology discusses specific articles from each issue, often with author interviews, on the Journal of Allergy and Clinical Immunology Journal Club blog [10]. One of the authors of this article has used blog-based websites for patient and professional education that have gathered >1.9 million page views since 2008 [11]. A blog has been proposed as the key of the two interlocking cycles of patient education and physician education [12]. The cycle of patient education starts during the clinic visit with:

- Diagrams and illustrations of an allergy-related health condition shown on a tablet or desktop/laptop computer.
- Printouts with an illness-specific web address are provided on leaving the clinic.
- Videos and educational materials which can be viewed on a computer or mobile device at home.
- Follow-up questions based on the information discussed can be asked on return to the clinic, or via an online portal.

This approach is powered by the cycle of physician education, which includes:

- 'Inbox for the web', which receives updates from select Twitter and Facebook accounts, RSS feeds of journals, professional societies and news organizations, and podcasts.
- Links shared on digital outposts such as Twitter, Facebook and Google+.
- Feedback received via comments from the digital outposts.
- In-depth discussions about the most important topics on the home-based blog, which are then shared by blog post via the social media channels above, thus closing the loop.

A blog can be also used a stepping stone to a full journal article (you are reading an example of this) or a research project [13].

YouTube

YouTube is the second largest search engine, after the service provided by its owner, Google. Millions of patient head to YouTube every day with queries such as 'how to use a nasal spray?', 'how to use an asthma inhaler?', 'do allergy shots work?', etc. What they find there is often misleading, even dangerous, and only occasionally accurate [14,15]. For example, only 15% of YouTube videos for asthma education discussed all steps of correct inhaler use [14]. Videos from health care organizations and medical societies were more comprehensive than those from nonprofessional educational groups and health care professionals not posting on behalf of a medical organization. Only 7.7% of YouTube videos on 'how to use a nasal spray' discussed all steps of correct nasal spray use [16].

There is a need for more reliable and accurate patient education videos on YouTube. Professional organizations and individual allergists have a duty to their patients, and to the general public, to provide accessible and accurate information via all social media channels and YouTube because this is where they are searching for health information. It is encouraging that most specialty organizations in allergy and immunology now have dedicated YouTube channels and many of them provide 'how to' videos on a variety of health conditions. Practicing allergists can use those videos or create their own and embed them in the patient education section of their websites. One suggested approach is to provide each patient with an individualized video prescription via the EMR portal, based on their specific needs, for example, 'what is asthma?', 'how to use an albuterol inhaler', 'how to use a controller inhaler with a spacer' and such. The development of asthma

apps and other programs featuring such tools is currently ongoing [17,18].

Ethical & legal aspects

There are inherent risks to social network use related to breaches of patient confidentiality, professionalism and privacy. Malpractice and liability risks should also be considered. The use of unique patient identifiers is regulated in the USA by the federal Health Insurance Portability and Accountability Act of 1996 [19]. Some of the identifiers (name, phone number) are easy to omit in social media posts as their avoidance almost constitutes 'common sense' when protecting a person's privacy. Other identifiers, however, are trickier to keep in mind at all times, for example, 'All geographical subdivisions smaller than a State', 'All elements of dates (except year)' and especially, 'Any other unique characteristic'. A seemingly innocent post on Twitter or Facebook, for example, 'I saw an interesting patient in Cleveland today' would violate the first two Health Insurance Portability and Accountability Act rules mentioned above. We advise all physicians to comply with both their country-specific privacy regulations and the social media guidelines provided by their professional societies and employers [20–22].

Conclusion & recommendations

We live in an 'always-on' era where social networks and technology are omnipresent and influence the daily lives of both patients and physicians. Allergists/immunologists, professional organizations and patient support groups are using social network services and tools in an attempt to improve patient care and increase awareness of different health conditions. However, there continues to be a paucity of information in the literature on how these interventions affect patient outcomes. The allergy and immunology community should direct future studies toward investigating how the use of social networks and other technology tools and services can improve patient care.

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