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Title

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Permalink

<https://escholarship.org/uc/item/3jr646v0>

Journal

Dermatology Online Journal, 24(2)

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Publication Date

2018

DOI

10.5070/D3242038166

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An updated assessment of social media usage by dermatology journals and organizations

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Abstract

Despite the increasing prevalence of social media usage, the activity of dermatology journals and professional and patient-centered organizations on top social media platforms has not been investigated since 2012. We investigated a total of 124 dermatology journals, 242 professional organizations, and 78 patient-centered organizations to assess their presence and popularity on social media. Searches were conducted to identify journals and organizations on Facebook and Twitter. Similar searches were done for organizations on LinkedIn. The number of Facebook likes, Twitter followers, and LinkedIn followers of the dermatological entities were quantified. There were 22 (17.7%) dermatology journals active on Facebook and 21 (16.9%) on Twitter. Amongst the professional organizations, 114 (47.1%) were on Facebook, 69 (28.5%) on Twitter, and 50 (20.7%) on LinkedIn. In comparison, 68 (87.2%) patient-centered organizations were on Facebook, 56 (71.8%) on Twitter, and 56 (71.8%) on LinkedIn. Our results demonstrate that the popularity of dermatology journals and professional and patient-centered organizations on top social networking sites has grown markedly since 2012. Although the number of dermatology journals on social media has increased since 2012, their presence continues to trail behind professional and patient-centered dermatological organizations, suggesting underutilization of a valuable resource.

Keywords: dermatology, social media, Facebook, Twitter, LinkedIn, dermatology journals, dermatology organizations, dermatology societies, dermatology patient-centered organizations

Introduction

According to the International Telecommunication Union, 4.3 billion households, equivalent to greater than half of the world's population, will have access to the Internet by the end of 2017 [1]. Since its conception in 1960, the Internet's role has rapidly expanded to inform and connect the public. This enormous growth has been partly facilitated by advances in social media. The number of worldwide social media users is expected to reach 2.5 billion by 2018, and U.S. use of social media has increased from 8% to 72% since 2005 [2, 3]. The most popular social media platform is Facebook with 2 billion monthly users, followed by YouTube with 1.5 billion users worldwide [4].

Social networking platforms allow users to connect and share an array of information including photographs, videos, messages, and opinions in real time. This digital society allows individuals, groups, and organizations instantaneous access to news, entertainment, and a multitude of information from their personal electronic devices.

The increasing prevalence of social media continues to dramatically impact the medical field. A growing number of patients routinely use social media to gather health information, discover new providers, share personal experiences, and participate in support groups related to their specific health conditions. According to a recent survey, approximately one-third of American consumers reported use of social media to conduct healthcare discussions and 42% referred to social media to access health-related reviews of other individuals [5]. Healthcare providers and medical societies also utilize social media to discuss cases with colleagues, disseminate education to the public, and remain informed of the latest advances in the field. According to a 2014 survey by a social media platform for physicians, 65% of doctors use social media sites for professional purposes, a steadily increasing percentage [3].

Since our first publication examining the role of social media in the field of dermatology [6], this arena has continued to grow at a rapid pace. Sites such as YouTube and Instagram continue to increase their market shares, although Facebook, Twitter, and LinkedIn remain the most popular platforms for professional organizations [4]. Our study aims to update our previous data from 2012 with regard to the use of Facebook, Twitter, and LinkedIn by dermatology journals, professional dermatology-related organizations, and dermatological patient-centered organizations.

Body of Article

Methods

Similar to our previously published investigation of social media use in dermatology circa 2012 [6], a search of the SCImago Journal Rankings database was performed to identify dermatology journals available as of 2016 [7]. Search criteria consisted of "Medicine" selected as the subject area, "Dermatology" as the subject category, "All regions/countries" for location, "Journals" for publication type, "2016" for year, and "0" as the threshold for number of citable documents published in the past three years. Additional optional

filters were not applied. Seventeen journals without a primary dermatological focus were excluded. A total of 124 dermatology journals were identified, including two journals that were not retrieved via SCImago, but were included in our previous study's list of top ten journals based on number of Facebook likes [6]. To assess social media presence, the main website of each dermatology journal was searched for direct links to Facebook and Twitter accounts. Likewise, journal titles were searched on both Facebook and Twitter to ensure all relevant pages were identified. The number of Facebook likes and Twitter followers for each identified journal account were recorded.

DermNet New Zealand and DermWeb were searched in an effort to identify all official professional dermatology-related organizations worldwide [8, 9]. Duplicates and non-dermatology focused organizations were excluded from lists obtained from the two sites, resulting in the identification of 239 professional dermatological organizations. An additional three discrete organizations were identified from our previous study's list of top ten professional organizations in terms of number of Facebook likes or Twitter followers [6]. LinkedIn groups representing multiple professional organizations instead of a single entity were not included. The main websites of each of the 242 identified professional dermatological organizations were searched for direct links to Facebook, Twitter, and LinkedIn. Additionally, the name of each organization was searched on Facebook, Twitter, and LinkedIn, and the number of Facebook likes, Twitter followers, and LinkedIn followers were compiled for identified accounts. Each organization was searched for in both English and, if applicable, its native language translation to improve the likelihood of finding their social media profiles.

In order to locate non-profit, patient-centered dermatological organizations, a list of dermatology terms was compiled and individually searched on GuideStar.org, a website dedicated to providing transparent information about all non-profit organizations registered with the IRS [10]. The list of search terms was adapted from search criteria used in our previous investigation of social networking in

dermatology and consisted of the following chronic dermatologic conditions and general dermatology terms: *acne, albinism, alopecia, atopic dermatitis, cutaneous lymphoma, dermatitis, dermatology, dermatology patient, dermatology support, dystrophic epidermolysis, EB, eczema, epidermolysis bullosa, hidradenitis suppurativa, hyperhidrosis, ichthyosis, melanoma, pemphigus, psoriasis, rosacea, skin cancer, Sturge-Weber, and vitiligo* [6]. Search results were limited to organizations grossing at least \$1 on their most recently available IRS Form 990. Organizations that did not have a primary dermatological focus were excluded. For each of the resulting 78 non-profit, patient-centered dermatological organizations identified, searches were done of their main websites to locate any direct links to Facebook, Twitter, and LinkedIn. Subsequently, each organization was searched on Facebook, Twitter, and LinkedIn, with the number of likes or followers recorded.

Searches for relevant journals and organizations were performed on September 10, 2017. The number of Facebook likes, Twitter followers, and LinkedIn followers for identified social media pages were recorded on November 15, 2017. Data was collected in a Microsoft Excel spreadsheet (Microsoft Inc, Redmond, WA, USA). In accordance with our previous study, the “popularity” of individual

journals and organizations was gauged on the basis of their number of Facebook likes, Twitter followers, and LinkedIn followers [6]. For organizations that created LinkedIn groups, the number of group members was included in the total number of LinkedIn followers to allow for comparison amongst the different social networking platforms. The number of Facebook likes, Twitter followers, and LinkedIn followers were sorted in descending order to establish the top ten most popular journals, professional organizations, and patient-centered organizations for each social networking site.

Results

Of the 124 identified dermatology journals, 22 (17.7%) were located on Facebook and 21 (16.9%) on Twitter in 2017. This was increased somewhat from 12.7% of dermatology journals with accounts on Facebook and 13.7% with accounts on Twitter in 2012 [6]. There was a wide range in the number of likes and followers amongst the ten most popular dermatology journals on Facebook and Twitter (**Table 1**). The *Journal of the American Academy of Dermatology* remained the most popular journal on Facebook, with an increase in likes from 1,747 in 2012 to 44,282 in 2017 [6]. *JAMA Dermatology* was the most popular journal on Twitter with 13,072 followers, up from 2,283 in 2012 [6].

Table 1. Most Popular Dermatology Journals on Social Media^a.

Facebook		Twitter	
Journal	No. of Likes	Journal	No. of Followers
<i>Journal of the American Academy of Dermatology</i>	44,282	<i>JAMA Dermatology</i>	13,072
<i>JAMA Dermatology</i>	27,340	<i>Dermatology Online Journal</i>	3,166
<i>Journal of Investigative Dermatology</i>	12,568	<i>Wounds UK</i>	2,800
<i>American Journal of Clinical Dermatology</i>	10,816	<i>Journal of the American Academy of Dermatology</i>	2,765
<i>Cosmetic Dermatology</i>	7,828	<i>Advances in Skin and Wound Care</i>	2,581
<i>Journal of Clinical & Experimental Dermatology Research</i>	5,786	<i>Cosmetic Dermatology</i>	2,496
<i>Cutis</i>	4,240	<i>British Journal of Dermatology</i>	2,426
<i>International Journal of Dermatology</i>	2,529	<i>Actas Dermo-Sifiliográficas</i>	1,566
<i>Actas Dermo-Sifiliográficas</i>	1,721	<i>International Journal of Dermatology</i>	1,416
<i>Advances in Skin and Wound Care</i>	1,700	<i>Journal of Investigative Dermatology</i>	1,384

^aNumber of Facebook likes and Twitter followers were recorded on November 15, 2017.

The professional dermatology-related organizations with the largest presences on Facebook, Twitter, and LinkedIn are listed in Table 2. There were 114 (47.1%) of the 242 identified professional organizations active on Facebook, 69 (28.5%) on Twitter, and 50 (20.7%) on LinkedIn. The Brazilian Society of Dermatology was the most popular professional organization on Facebook with 155,380 likes. The American Academy of Dermatology rose to the most popular professional organization on Twitter in 2017 with 27,576 followers, up from 1,517 followers in 2012 [6]. The Associated Skin Care Professionals organization was the most active on LinkedIn with 19,040 followers compared to 2,975 in 2012.

Of the 78 non-profit, patient-centered dermatological organizations identified, 68 (87.2%) were active on Facebook, 56 (71.8%) on Twitter, and 56 (71.8%) on LinkedIn. The most popular patient-centered organization on Facebook was the Butterfly Fund with 72,071 likes (Table 3). The National Psoriasis Foundation remained the second most

popular on Facebook with 70,672 likes, increased from 15,227 likes in 2012 [6]. The Children's Melanoma Prevention Foundation was the most active patient-centered organization on Twitter with 21,596 followers, followed by the National Psoriasis Foundation with 19,404 followers. In terms of the presence of patient-centered organizations on LinkedIn, The Skin Cancer Foundation rose from the third most active in 2012 with 94 followers to the most active in 2017 with 2,340 followers [6].

Discussion

Social media has and will continue to be a topic of interest throughout the medical profession, as it is an effective method of reaching patients, providers, and other members of the community. This study supports a continued surge in social media usage by dermatological entities when compared to previous study data from 2012 [6].

Table 2. Most Popular Professional Dermatological Organizations on Social Media^a.

Facebook		Twitter		LinkedIn	
Organization	No. of Likes	Organization	No. of Followers	Organization	No. of Followers
Brazilian Society of Dermatology	155,380	American Academy of Dermatology	27,576 ^b	Associated Skin Care Professionals	19,040
American Academy of Dermatology	125,642 ^b	dermRounds Dermatology Network	15,222	American Academy of Dermatology	7,210
Colombian Association of Dermatology and Dermatologic Surgery	48,329	Society of Dermatology Physician Assistants	5,264	American Society for Cosmetic Dermatology and Aesthetic Surgery	2,731
Associated Skin Care Professionals	26,351	Spanish Academy of Dermatology and Venereology	4,816	Society of Dermatology Physician Assistants	2,538
dermRounds Dermatology Network	19,497	Saudi Society of Dermatology and Dermatologic Surgery	4,550	American Society for Dermatologic Surgery	2,331
Dermatological Society of Thailand	17,750	American Society of Dermatopathology	3,538	European Academy of Dermatology and Venereology	2,187
Philippine Dermatological Society	11,629	British Association of Dermatologists	3,507	American Society of Dermatopathology	2,014
European Academy of Dermatology and Venereology	9,641	Dermatology Nurses' Association	3,376	American Society for Laser Medicine and Surgery	1,921
Brazilian Society of Dermatologic Surgery	8,189	Canadian Dermatology Association	3,067	Dermatology Nurses' Association	948
American Society of Dermatopathology	6,447	Brazilian Society of Dermatology	2,983	Wound Healing Society	688

^aNumber of Facebook likes, Twitter followers, and LinkedIn followers were recorded on November 15, 2017.

^bRepresents aggregate data from the American Academy of Dermatology and the American Academy of Dermatology Member pages.

The *Journal of the American Academy of Dermatology* continues its reign as the number one dermatology journal on Facebook, with a greater than 25-fold increase in number of likes compared to our previous study [6]. Seven of our original top 10 most popular journals remained in the current study's top 10 list on Facebook, whereas only four remained on Twitter. Although the proportion of dermatology journals with accounts on Facebook and Twitter has increased since 2012, these figures continue to fall behind those of professional and patient-centered organizations. Despite underutilization of social media by many dermatology journals, their parent-publishing companies often enjoy significant followings on Facebook, and Twitter. For example, Elsevier has over 280,000 combined Facebook and Twitter users. The popularity of such publishing companies on social media is not surprising considering the breadth of their journal publications across many fields.

The Brazilian Society of Dermatology and the American Academy of Dermatology, ranked as the

number one and two professional dermatology organizations on Facebook, were the only entities that received six-figure likes in the entirety of this study (155,380 and 125,642 likes, respectively). The magnitude of these numbers supports the dominance of Facebook in the social media realm. Nine different countries were represented amongst the top 10 most popular professional organizations on Facebook, Twitter, and LinkedIn. While not one of these top 10 organizations, the Dermatology in Russia organization had a strong following on VK, a popular regional social media site similar to Facebook. The number and popularity of such alternative social media websites will likely continue to grow, further expanding the communication avenues available to dermatological entities worldwide.

The rapid growth of social media required us to refine our search parameters for identifying professional and patient-centered organizations for inclusion in this assessment. In our past study, we used a keyword search to find any relevant organization, regardless of commercial interest or non-profit status [6]. However, the rise of commercial

Table 3. Most Popular Non-profit, Patient-centered Dermatological Organizations on Social Media^a.

Facebook		Twitter		LinkedIn	
Organization	No. of Likes	Organization	No. of Followers	Organization	No. of Followers
The Butterfly Fund	72,071	Children's Melanoma Prevention Foundation	21,596	The Skin Cancer Foundation	2,340
National Psoriasis Foundation	70,672	National Psoriasis Foundation	19,404	National Psoriasis Foundation	1,900
The Skin Cancer Foundation	56,515	The Skin Cancer Foundation	18,246	Melanoma Research Alliance	902
National Eczema Association	40,603	Melanoma Research Foundation	12,719	Melanoma Research Foundation	836
National Rosacea Society	36,001	Melanoma Research Alliance	9,248	National Eczema Association	361
Melanoma Research Foundation	35,809	AIM at Melanoma	6,056	National Alopecia Areata Foundation	276
EB Research Partnership	25,022	National Alopecia Areata Foundation	4,394	DEBRA of America	247
AIM at Melanoma	22,158	National Eczema Association	3,171	Children's Alopecia Project	167
Children's Alopecia Project	21,685	Children's Alopecia Project	2,950	IMPACT Melanoma	161 ^b
National Alopecia Areata Foundation	20,691	National Rosacea Society	2,299	National Vitiligo Foundation	140

^aNumber of Facebook likes, Twitter followers, and LinkedIn followers were recorded on November 15, 2017.

^bLocated under organization's prior name, Melanoma Foundation of New England.

Abbreviations: EB, Epidermolysis Bullosa; DEBRA, Dystrophic Epidermolysis Bullosa Research Association.

and fraudulent accounts required us to narrow our focus for this follow-up assessment. In the case of professional dermatology organizations, we created a list of official global organizations, whereas for patient-centered organizations, we verified 501(c)3 non-profit, IRS-registered status by searching the GuideStar database [10]. As a result, several patient-centered organizations that were included in our previous study [6] were not included in the current study. Verifying IRS-registered status resulted in the elimination of any patient-centered organizations not founded in the United States; nevertheless, our lists of top 10 most popular organizations matched our previous top 10 data by 60%.

In contrast to our original study [6], we did not include several news-based publications, although these too have continued to grow in social media presence. For instance, the *Dermatology Times* news magazine has experienced an over six-fold increase in number of Twitter followers since 2012, reaching 19,800 followers on November 15, 2017. Likewise, *Dermatology News* (formerly *Skin & Allergy News*) has grown in popularity on social media from 1,942 Facebook likes and 2,798 Twitter followers in 2012 to 13,279 Facebook likes and 12,679 Twitter followers in 2017. In the span of just over five years, the monthly *Practical Dermatology* publication went from less than 100 likes and followers on Facebook and Twitter, respectively, to 4,800 Facebook likes and 1,531 Twitter followers in 2017. During the same time period, *The Dermatologist* trade journal increased in number of Facebook likes from 456 to 5,470 and in

number of Twitter followers from 1,318 to 10,190. Clearly, the expanding presence of dermatological entities on social media is far-reaching and not limited to academic journals and professional or patient-centered organizations.

Social media provides a unique, real-time method of engaging with wide audiences ranging from patients to providers to professional societies and more. This form of communication in the dermatological world has grown throughout the past five years and is likely to continue growing. Many consistencies were seen within the trends and patterns of popularity compared to our previous publication [6]. The variety of relationships built through these platforms will no doubt continue to improve education and dissemination of information related to dermatology.

Conclusion

Overall, this work firmly supports an increase in the use of social media by dermatology journals, professional dermatology-related organizations, and dermatological patient-centered organizations. The popularity of such dermatological entities on Facebook, Twitter, and LinkedIn has grown substantially. Although the presence of dermatology journals on social media has grown since 2012, the proportion of journals on Facebook and Twitter continues to trail behind professional and patient-centered dermatological organizations, suggesting underutilization of a valuable resource.

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