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Dermatology on Instagram: An Analysis of Hashtags

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INTRODUCTION

Forty-two percent of Americans search for health-related information on social media platforms, and forty-five percent of consumers report that social media health information influences their decision to seek care.¹ However, online information is not always accurate, nor does it consistently come from credible sources.^{2,3} We aimed to characterize the content and sources of the top Dermatology posts on Instagram, the most popular photo-sharing platform with 800 million monthly active users.⁴

METHODS

We generated a list of the top 81 dermatologic diagnoses and procedures based on the National Ambulatory Medical Care Survey and the 2016 American Society for Dermatologic Surgery Survey of Dermatologic Procedures.^{5,6} Synonymous lay terms for these diagnoses and procedures were added. On September 17, 2017, these terms were queried as Instagram hashtags. Hashtags are keywords users can add to label their posts. JP and MC recorded the top 20 most common hashtags for medical and procedural dermatology (Table 1) and noted the total number of posts tagged with each hashtag. Instagram automatically selects “top 9” posts to highlight for each hashtag, based on the highest engagement level. Engagement is determined by a private Instagram algorithm incorporating the number of comments and likes of the photo, and the following-to-follower ratio of the poster, among other criteria.

We analyzed the content of each “top 9” post. We excluded posts unrelated to dermatology, duplicates, and paid advertisements marked by “#ad” as required by the Federal Trade Commission. We assessed the credentials and occupation of users as reported on the Instagram account or linked website of the original poster. We used the American Board of Medical Specialties website (www.certificationmatters.org) to determine if physicians who posted were board-certified dermatologists. We classified posts into the following categories: education, self-promotion, non-paid product advertisement, and patient-posted. As

Instagram data is publicly available, this study was exempt from the Institutional Review Board.

RESULTS

A total of 10,197,884 Instagram posts were tagged with the 43 hashtags queried for this study. Of these, 387 were considered “top posts” and 258 posts met inclusion criteria.

Ninety-one unique posters (35%) identified as working in the healthcare field, either as a physician (80% of total health-related posters), nurse or nurse practitioner (10%), dentist (4%), esthetician (3%), or physician assistant (3%) (Table 2). Self-identified physicians were responsible for 73 (28%) of top posts; of these, 27 posters (10%) reported board certification in a medical specialty, of which 23 (9%) were confirmed online. Self-identified dermatologists were responsible for 16% of top posts (40 posts). Only 5% of top posts (14 posts) were made by American Board of Dermatology-certified dermatologists. Of the 7 individuals using the hashtag #boardcertifieddermatologist, 4 were certified by the American Board of Dermatology and 1 was a board-certified dermatologist in Korea.

Of the 40 posts by self-identified dermatologists, 14 posters practice in America and 3 in Canada. Other countries represented included: Brazil (7), Russia (4), Turkey (2), Poland (2), and one post each practicing in the United Kingdom, Philippines, Panama, Lebanon, Korea, Istanbul, Iran, and Indonesia.

Of the posts with medical dermatology hashtags, 13% were advertisements, 16% self-promotional, 23% posted by patients, and 48% educational. For procedural dermatology-related hashtags, 6% were advertisements, 58% self-promotional, 20% posted by patients, and 15% educational (Table 2). Posts made by board-certified dermatologists were educational in content 93% of the time, with only 7% of posts being self-promotional. Non-physician healthcare professionals posted self-promotional content 56% of the time. Non-dermatologist physicians posted self-promotional content 67% of the time.

DISCUSSION

We found that board-certified dermatologists produce a small proportion of the top dermatology-related posts published on Instagram. The vast majority of dermatology-related top posts are made by individuals without formal dermatology training. Furthermore, compared to non-physician healthcare professionals and non-dermatologist physicians, board-certified dermatologists posting on Instagram tend to eschew self-promotion in favor of educational content. As the use of social media for health information grows, our patients stand to benefit from the increased presence of dermatologists on these platforms.

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DISCLOSURES

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TABLE 1.

Top Hashtags Related to Medical and Procedural Dermatology on Instagram

	Most Common Dermatologic Diagnoses	Most Common Dermatologic Procedures
Acne	1,852,029	Botox 1,847,196
Eczema	406,904	Laser 1,398,163
Alopecia	291,652	Filler 626,494
Hairloss	287,587	Juvederm 398,056
Psoriasis	227,413	Restylane 226,889
Pimples	209,775	Laser hair removal 186,149
Rosacea	78,502	Dysport 136,821
Cyst	72,112	Tattoo removal 112,993
Rash	68,833	Coolsculpting 108,295
Melanoma	68,743	Body contouring 105,485
Skin cancer	65,776	Acne scars 105,134
Hyperpigmentation	47,027	Melasma 98,248
Atopic dermatitis	5132	Sun damage 73,332
Seborrheic dermatitis	2016	Laser tattoo removal 52,611
Contact dermatitis	1833	Dermal fillers 130,429
Folliculitis	820	Kybella 45,166
Tinea	800	Radiesse 39,865
Benign tumor	641	Chemical peel 76,009
Actinic keratosis	504	Radiofrequency 37,393
Molluscum contagiosum	259	Ultherapy 36,481
Total Medical Dermatology-Related	3,722,970	Total Procedural Dermatology-Related 5,893,190
	Board certified dermatologist 716	
	Dermatologist 166,150	
	Dermatology 415,858	
	Total Hashtags Queried 10,197,884	

TABLE 2.

Source and Content of Dermatology-Related Posts

Characteristics of the Individuals Posting Dermatology-Related Content	n	Content of Dermatology-Related Posts		
		Medical (n, %)	Procedural (n, %)	Education
Non-health related	167	67 (48%)	18(15%)	
Health-related	91	19(14%)	7 (6%)	Product Advertisement
Self-identified Physicians	73	21 (15%)	69 (58%)	Self-Promotion
Physicians practicing internationally	44	33 (24%)	24 (20%)	Patient Posted
Physicians practicing in the US	29			
Dermatologists (practicing in the US and internationally)	40			
Dermatologists (certified by American Board of Dermatology)	14			
Nurses / Nurse Practitioners	9			
Dentists	4			
Estheticians	3			
Physician Assistants	2			