## Response to: "Dermatology without dermatologists? Analyzing Instagram influencers with dermatology-related hashtags"



To the Editor: We read with great interest the recent research letter by Ranpariya et al, "Dermatology without dermatologists? Analyzing Instagram influencers with dermatology related hashtags." The authors show that board-certified dermatologists compose a minor fraction of popular dermatology content shared by influencers on Instagram. In a similar study, Park et al<sup>2</sup> found as few as 5% of all dermatology content on Instagram was created by board-certified dermatologists, regardless of influencer status or post engagement. If Raniparyia's parameters requiring >40,000 followers are used, it is unsurprising that only 6 of 146 of the top influencers were board-certified dermatologists (0 of 70 of the top trending content came from dermatologists). The recent findings by Sierro et al<sup>3</sup> show that of all board-certified dermatologists on Instagram, only 8 had >40,000 followers.

Understanding the impact of influencers in dermatology necessarily requires defining an influencer. We assert that defining an influencer strictly based on follower count can lead to pitfalls because fake followers are for sale for as little as \$13 per 1000 followers. Although this practice is against its community guidelines, Instagram does not always successfully "purge" these followers. The most basic definition of an influencer would include accounts with >10,000 followers, because this is the threshold at which most apps offer exclusive marketing functionality. The Advertising Standards Authority, a United Kingdom-based advertising watchdog, recently ruled that individuals with >30,000 followers are considered a celebrity and are therefore

subject to additional advertising regulations.<sup>4</sup> The Later blog<sup>5</sup> defines influencer types as nano, <10,000; micro, 10,000 to 50,000; midtier, 50,000 to 300,000; and macro,  $\ge 300,000$ .<sup>5</sup>

A more accurate measure of influence is engagement rate (ER), defined by (total likes + comments)/ followers ×100. ER is usually based on the most recent 10 to 20 posts and can be easily looked up on sites like SocialBlade and MightyScout. ER increases with greater quality of shared content and stronger elicited response and better approximates true influence rather than favoring accounts with large numbers of followers. For example, an account with 100,000 followers and an ER of 2% would directly influence 2000 people, whereas an account with 25,000 followers and an ER of 10% would directly influence 2500 people. Although ER tends to decline with rising follower count, overall engagement tends to continue growing. According to the Later blog,<sup>5</sup> ER rates range from 7% (<10,000 followers) to 2.6% (1 million followers) and varies by specific industry.

Influencer marketing agencies use  $ER \times$  (total followers) to determine the true number of followers likely to be reached in an influencer campaign. Therefore, to truly measure influencers in dermatology, considering ER (ie, average number of likes, comments, and interactions) is a more accurate measure than simply follower count (Table I).

Moshe Y. Bressler, BS, a and John G. Zampella, MDb

From the New York Institute of Technology College of Osteopathic Medicine, Glen Head, New York<sup>a</sup>; and the Ronald O. Perelman Department of Dermatology, New York University, New York, New York.<sup>b</sup>

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Table I. Top influencer-dermatologists on Instagram in 2019, with respective engagement rates

Rank	Name	Username	Followers	Engagement rate, %*	Average engagment <sup>†</sup>	Location	Content
1	Sandra Lee	@drpimplepopper	3,941,080	0.61	24,041	Oakland, CA	Medical and cosmetic
2	Shereene Idriss	@shereeneidriss	209,654	2.07	4,340	New York, NY	Cosmetic
3	Paul Jarrod Frank	@drpauljarrodfrank	134,792	0.22	297	New York, NY	Cosmetic
4	Harold Lancer	@drlancerrx	128,212	0.23	295	Los Angeles, CA	Cosmetic
5	Janelle Vega	@drjanellevega	115,213	0.81	933	Miami, FL	Cosmetic
6	Andrea Suarez	@drdrayzday	155,237	2.67	4,145	Houston, TX	Medical and cosmetic
7	Michelle Henry	@drmichellehenry	68,759	1.13	777	New York, NY	Cosmetic
8	Jenny Liu	@derm.talk	56,563	2.12	1,199	Minneapolis, MN	Medical and cosmetic
9	Bobbak Mansouri <sup>‡</sup>	@doctorbobback				Austin, Tx	Medical
10	Shari Marchbein	@drsharimarchbein	42,692	2.17	926	New York, NY	Medical and cosmetic

<sup>\*</sup>Based on 20 most recent posts as of July 7, 2020. Engagement rate = (likes + comments per post)/(total followers × 100).

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<sup>&</sup>lt;sup>†</sup>Based on 20 most recent posts.

<sup>\*</sup>Based on 20 most recent pos \*Account deactivated.

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Reprints not available from the authors.

Correspondence to: John G. Zampella, MD, 555 Madison Ave, 4th Floor, New York, NY 10022

E-mail: john.zampella@nyulangone.org

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