

DermTok: How TikTok Is Changing the Landscape of Dermatology Patient Education

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ABSTRACT

Background: TikTok gives its users a platform to share and view short videos on a wide range of topics, including dermatology related topics. This project sought to analyze the sources of TikTok videos associated with the treatment of four dermatologic conditions and to report the percentage of videos posted by board-certified dermatologists.

Methods: On July 16th, 2021, an investigator input the following hashtags into the TikTok application's search bar: #AcneTreatment, #EczemaTreatment, #PsoriasisTreatment, and #RosaceaTreatment. After the total of 400 videos was obtained, the videos were then classified into the following categories based on the user posting the video: dermatologist, dermatology resident, non-dermatologist physician, physician assistant, nurse practitioner, registered nurse, esthetician, patient, beauty blogger, and other. Videos that were not in English, paid advertisements or by a business page, and/or unrelated to treatment or education of a dermatologic condition were excluded.

Results: The top posters of all the videos analyzed were patients (40.8%) followed by dermatologists (16.8%). Of all the videos analyzed, 37.3% were posted by licensed professionals and the remaining 62.7% were posted by non-licensed posters. The licensed professionals mostly posted about acne (52.4%) out of the four conditions. Non-professional posters mostly posted about psoriasis (86.7%) and eczema (66.7%) out of the four conditions.

Conclusions: There is a need for more dermatologist-created, educational content on TikTok and other platforms to increase the likelihood that users will interact with dermatologic content posted by board-certified dermatologists.

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INTRODUCTION

The role of social media in patient education continues to grow; approximately 80% of internet users in the United States have searched online for health information.¹ With this growth, there are increasing opportunities for dermatologists to use social media as a patient education platform, as well as challenges.² One of the most popular social media applications today is TikTok, which as of June 2021 had accumulated over 1 billion users and has been downloaded over 200 million times in the United States alone.³ TikTok gives its users a platform to share and view short videos on a wide range of topics, including dermatology related topics. Villa-Ruiz et al examined the top viewed dermatology-related videos on TikTok and reported that patient-experience and educational videos dominate the content of said videos, the majority posted by patients at 48%, followed by board certified dermatologists at 25.8%.⁴

Our study sought to analyze the sources of TikTok videos containing content related to treatment and educational material of four top dermatologic conditions. Selection of conditions was

guided by the American Academy of Dermatology Association and included acne, eczema, psoriasis, and rosacea.⁵ We also sought to use a greater sample size than previous dermatologic TikTok studies and to share the breakdown of sources for each condition to examine how sources may differ depending on the condition searched. In our search, we thought to keep TikTok's pre-set search result filters of "all time" for date posted and "relevance" for sorting to most closely mimic the results that users would come across when searching for treatment of the study's four dermatologic conditions. We used the following four hashtags, #AcneTreatment, #EczemaTreatment, #PsoriasisTreatment, and #RosaceaTreatment to generate a sample of 100 videos per hashtag. The samples were then categorized by their source to analyze the percentage of videos that were posted by dermatologists, dermatology residents, and other licensed professionals versus all other posters.

MATERIALS AND METHODS

On July 16th, 2021, an investigator input the following hashtags into the TikTok application's search bar: #AcneTreatment, #EczemaTreatment, #PsoriasisTreatment, and

#RosaceaTreatment. With each search, the top 100 videos were copied into an excel spreadsheet via a URL link to be analyzed later. After the total of 400 videos was obtained, the videos were then classified into the following categories based on the user posting the video: dermatologist, dermatology resident, non-dermatologist physician, physician assistant, nurse practitioner, registered nurse, esthetician, patient, beauty blogger, and other. Beauty blogger was defined as an individual who routinely posts video content on makeup, hair, skincare, and/or other beauty topics. The "other" classification included posts by hair stylists, barbers, spa technicians, relatives of patients, other specialists, and unidentified posters. The identities of content creators were confirmed through biographic information on TikTok or other linked social media platforms. Videos that were not in English, paid advertisements or by a business page, and or unrelated to treatment or education of a dermatologic condition were excluded.

RESULTS

Licensed Professional Posters vs Non-Licensed Posters

Of the 400 videos identified, 292 were included. We found that of all the videos, 37.3% were posted by licensed professionals, defined as dermatologists, dermatologist residents, non-

dermatologist physicians, physician assistants, nurse practitioners, registered nurses, and estheticians (Table 1). The remaining 62.7% were posted by non-licensed posters, defined as patients, beauty bloggers, and all others (Table 1). Licensed professionals dominated the videos that resulted from the search #AcneTreatment at 52.4%, followed by the #RosaceaTreatment videos at 50.0% (Table 1). Conversely, eczema and psoriasis videos dominated in the non-licensed posters at 66.7% and 86.7% respectively (Table 1).

Licensed Professional Posters

Of the licensed professional posters, 16.8% of the total videos analyzed were posted by dermatologists, and 6.8% were posted by dermatology residents (Table 2). These two groups, dermatologists and dermatology residents, were the leading posters for the licensed professionals, followed by physician assistants (3.8%) then non-dermatologist physicians (3.4%) when analyzing the total videos in this study (Table 2). When examining the licensed professional posters within each specific skin condition, dermatologists were the leading posters in all the conditions except acne in which dermatology residents were the top posters (Table 2).

TABLE 1.

Treatment and Educational Videos From Licensed Professionals vs Non-Licensed Posters, n (%)					
	Acne	Eczema	Psoriasis	Rosacea	Total for All Conditions
Total Videos	84	51	83	74	292
Licensed Professionals*	44 (52.4)	17 (33.3)	11 (13.3)	37 (50.0)	109 (37.3)
Non-Licensed Posters [^]	40 (47.6)	34 (66.7)	72 (86.7)	37 (50.0)	183 (62.7)

Percentages based on number of videos after exclusions for each skin condition and for total videos after exclusions in the last column.

*Licensed Professionals includes the groups of dermatologist, dermatology resident, non-dermatologist physician, physician assistant, nurse practitioner, registered nurse, and esthetician.

[^]Non-Licensed Posters includes the groups of patient, beauty blogger, and other.

TABLE 2.

Source of Treatment and Educational Videos, n (%)					
	Acne	Eczema	Psoriasis	Rosacea	Total for All Conditions
Excluded	16	49	17	26	108
Total analyzed after exclusions	84	51	83	74	292
Dermatologist	16 (19.0)	7 (13.7)	5 (6.0)	21 (28.4)	49 (16.8)
Dermatology Resident	17 (20.2)	1 (2.0)	0 (0.0)	2 (2.7)	20 (6.8)
Non-Dermatologist Physician	4 (4.8)	4 (7.8)	2 (2.4)	0 (0.0)	10 (3.4)
Physician Assistant	2 (2.4)	0 (0.0)	3 (3.6)	6 (8.1)	11 (3.8)
Nurse Practitioner	2 (2.4)	0 (0.0)	0 (0.0)	1 (1.4)	3 (1.0)
Registered Nurse	1 (1.2)	2 (3.9)	0 (0.0)	1 (1.4)	4 (1.4)
Esthetician	2 (16.7)	3 (25.0)	1 (8.3)	6 (50.0)	12(4.1)
Patient	25 (29.8)	19 (37.3)	55 (66.3)	20 (27.0)	119 (40.8)
Beauty Blogger*	14 (16.7)	7 (13.7)	0 (0.0)	12 (16.2)	33 (11.3)
Other [^]	1 (1.2)	8 (15.7)	17 (20.5)	5 (6.8)	31 (10.6)

Percentages based on number of videos after exclusions for each skin condition and for total videos after exclusions in the last column.

*Defined as an individual who routinely post video content on makeup, hair, skincare, and other beauty topics.

[^]Hair stylist, barbers, spa technicians, relatives of patients, and unidentified posters.

Non-Licensed Posters

Of the non-licensed posters, 40.8% of the total videos analyzed were posted by patients, followed by beauty bloggers at 11.3% (Table 2). When examining the non-licensed posters within each specific skin condition, patients were the leading posters for all conditions (Table 2).

All Posters

Out of all the videos analyzed, patients led as the top posters at 40.8% followed by dermatologists at 16.8% (Table 2). Following dermatologists, beauty bloggers contributed to 11.3% of the total videos analyzed (Table 2). For acne, eczema, and psoriasis, the lead posters were patients at 29.8%, 37.3%, and 66.3%, respectively (Table 2). For rosacea, the lead posters were dermatologists at 28.4% (Table 2).

DISCUSSION

The first study to characterize the content, sources, and reliability of the top dermatologic videos on TikTok found that acne, alopecia, warts, cysts, eczema, rosacea, psoriasis, and skin cancer were the top 8 most viewed dermatologic diseases on the application. Analysis of 200 videos on these diseases found that patient-experience and educational videos dominate the content of said videos. Most of these videos were found to be posted by patients at 48%, followed by board certified dermatologist at 25.8%. The patient posted educational videos were given a reliability percentage of 48% based on adherence with American Academy of Dermatology (AAD) guidelines. The dermatologist posted educational videos were given a reliability percentage of 96.8%.⁴ This study gives insight into the benefits and risks of patients obtaining dermatologic information on TikTok.

The quality of the dermatologic educational content on TikTok varies widely. One study examined this, looking specifically at the hashtag #acne. Analysis of the top 100 videos found a mean content quality rating of 2.03 which indicates serious to potentially important shortcomings.⁶ This study emphasizes the need for quality educational content on TikTok. Another study examined the top 31 educational videos by board certified dermatologists. They found that these "viral" videos most commonly feature on-screen text, healthcare attire, and music.⁷ This study highlights potential strategies that dermatologists can utilize to increase the visibility of their educational content. When we look at dermatologists actively creating content on TikTok, we find that most are residents or early in practice. A study looking at the top 10 TikTok dermatologists found that 3 were dermatology residents and 7 were dermatologists with an average of 7-8 years of practice.⁸ This study suggests that younger dermatologists are embracing the new role social media plays in dermatology.

Our study is the largest analysis of dermatologic TikTok videos, examining 400 videos with a focus on four common

skin conditions. It is important to mention that 27% of the 400 videos originally collected were excluded, and 76% of the excluded videos were either advertisements of a product or were from a business' TikTok account. This could suggest that patients seeking dermatologic advice on TikTok and other social media applications are even more likely to come across a treatment video posted by a dermatologist. Future analysis is indicated to examine the role of social media advertisements on dermatology patient education.

In the analysis of the remaining videos, TikTok's treatment-related content for skin conditions came primarily from patients sharing treatments that worked for their specific condition. These results of patient-dominated posters remain consistent across most common skin conditions, except rosacea in which dermatologist posters prevailed. As the popularity of social media continues to grow, it is important for more dermatologists to use TikTok and other leading social media platforms to increase educational content on a broad range of skin conditions. Additionally, an increase in dermatologist-created, educational content on TikTok and other platforms will encourage users to seek care from board-certified dermatologists. In a continually changing social media landscape, further research is needed to understand the role social media plays in the public's understanding of common medical conditions.

DISCLOSURES

Williams and Campbell have no conflicts of interest to declare. Woolery-Lloyd is a TikTok Creator and Learn on TikTok Partner.

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