# Information Regarding Dermatology as Seen on Social Media Platform TikTok

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# *Table of Contents*

# Information Regarding Dermatology as Seen on Social Media Platform TikTok

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## *Abstract*

**Methods:** In November 2022, TikTok was searched using dermatology-related keywords. Accounts with ?50% dermatology content were selected. An engagement score was calculated for each account, and the top 10 were further analyzed using DISCERN criteria. The Kruskal-Wallis and Mann-Whitney U tests, along with a two-tailed independent t-test, were employed for statistical analysis.

**Results:** Out of 22,411 videos, 17,085 (76.3%) were informational. Dermatologists led in paid sponsorship videos (65% of 502 videos). Significant differences in engagement scores were found across different provider types, with medical clinics and aestheticians receiving the highest scores. Dermatologist-run accounts had higher views and comments but similar overall DISCERN scores to non-dermatologist accounts. However, dermatologists better referenced treatment uncertainty and explanations, while non-dermatologists more frequently discussed treatment risks.

Discussion: The substantial engagement with dermatology content on TikTok highlights its role as a significant information source, albeit with generally low educational quality. Given the high consumer trust in TikTok, dermatologists face an ethical obligation to improve the accuracy and quality of their online content to counteract potential misinformation.

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## Abstract

**Introduction:** With Americans spending over two hours daily on social media, platforms like TikTok

have become prevalent sources for healthcare information. This study evaluates the quality and quantity of dermatology-related content on TikTok.

**Methods:** In November 2022, TikTok was searched using dermatology-related keywords. Accounts with ≥50% dermatology content were selected. An engagement score was calculated for each account, and the top 10 were further analyzed using DISCERN criteria. The Kruskal-Wallis and Mann-Whitney U tests, along with a two-tailed independent t-test, were employed for statistical analysis.

**Results:** Out of 22,411 videos, 17,085 (76.3%) were informational. Dermatologists led in paid sponsorship videos (65% of 502 videos). Significant differences in engagement scores were found across different provider types, with medical clinics and aestheticians receiving the highest scores. Dermatologist-run accounts had higher views and comments but similar overall DISCERN scores to non-dermatologist accounts. However, dermatologists better referenced treatment uncertainty and explanations, while non-dermatologists more frequently discussed treatment risks.

**Discussion:** The substantial engagement with dermatology content on TikTok highlights its role as a significant information source, albeit with generally low educational quality. Given the high consumer trust in TikTok, dermatologists face an ethical obligation to improve the accuracy and quality of their online content to counteract potential misinformation.



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To the Editor:

## Introduction

Americans spend an average of 2 hours and 7 minutes per day on social media platforms.[1] It has

become evident that patients are utilizing these networks to seek healthcare knowledge.[2] This study aims to describe the quantity and quality of dermatologic produced content on the social media platform TikTok.

**Methods**

The Tik Tok platform was screened in November 2022 for the following keywords: dermatology, derm, skin, skin care, aesthetician, dermatologist, esthetician, derm physician assistant, dermatology physician assistant, derm PA, dermatology nurse, derm nurse, and derm nurse practitioner. Accounts containing greater than or equal to 50% dermatology content were included. Of these accounts, an engagement score was calculated by dividing the total number of likes by the total number of followers. The top 10 accounts were isolated based on engagement score and underwent further analysis of each of their top 10 videos using the DISCERN criteria (Table 1). These accounts were then grouped and analyzed based on occupation (Table 2). Two co-investigators [AO and AN] independently scored the videos. Differences in scoring were resolved by discussion between the two raters. Kruskal-Wallis, Mann-Whitney U Test, and two-tailed independent t-test were used to analyze the data.

22,411 Tik-Tok videos were analyzed. Of these 17,085 (76.3%) were informational videos discussing skin/dermatology. 502(2.2%) videos had Tik-Tok verified paid sponsorship. Dermatologists comprised the majority of paid sponsorship videos (n=328, 65%). A total of 35 of the 94 accounts analyzed met the inclusion criteria, comprising 18(%) dermatologists, 6(%) aestheticians, 4(%) medical clinics, and 2(%) medical spas. Using the Kruskal-Wallis Test, significant differences in engagement scores were found across groups (p=0.00034). Medical Clinics and Aestheticians had the two highest average engagement scores.

## Results

A two tailed independent t-test was utilized to confirm statistical significance between DISCERN scores of the dermatologist run and non-dermatologist run accounts. Accounts belonging to dermatologists had significantly more views (25,942,000 vs. 4,969,502; p<0.001) and comments (6,895.86 vs. 2,984.22; p=0.04). Overall DISCERN scores did not differ between dermatologist accounts and non-dermatologist accounts (34.18 vs 33.46; p=0.53), but subsections of the DISCERN scale did show significant differences. Dermatologist accounts were more likely to refer to areas of uncertainty (1.76 vs. 1.22; p<0.01) and describe how each treatment works (2 vs 1.48; p=0.03). However, non-dermatologist accounts were more likely to describe the risks of each treatment (1.56 vs 1.24; p=0.0495). The mentioned scores were still very low for both groups, suggesting an overall low quality of content for the videos.

**Table 1:** Table 1 displays the average video length, views, likes, comments, and DISCERN score of the top 10 included accounts based on engagement score. An * represents an account belonging to a dermatologist.

Table 1. “Tik-Tok Video Data of Top 10 Accounts”

| **Account** **dermatologist* | **Average Video Length (Of Top 10 Videos) (seconds)** | **Average Number of Views (Of Top 10 Videos)** | **Average Likes (Of Top 10 Videos)** | **Average Comments (Of Top 10 Videos)** | **Average DISCERN (Of Top 10 Videos).** |
|---|---|---|---|---|---|
| Account 1 | 16.6 | 1,049,350 | 102,880 | 297.5 | 34.3 |
| Account 2 | 15.2 | 1,409,470 | 107,408.6 | 672.2 | 34 |
| Account 3 | 39 | 16,640,000 | 3,200,000 | 12,121.5 | 31.1 |
| Account 4 | 23.2 | 3,088,690 | 176,179.4 | 1349.1 | 33.1 |
| Account 5 | 20.5 | 2,660,000 | 122,340 | 480.8 | 34.8 |
| Account 6* | 50.8 | 64,920,000 | 4,187,020 | 20,217.6 | 32 |
| Account 7* | 44.7 | 13,590,000 | 121,703.5 | 623.4 | 37.6 |
| Account 8* | 21.5 | 26,970,000 | 1,115,094.8 | 6,137.4 | 34.5 |

| | | | | | |
|---|---|---|---|---|---|
| Account 9* | 11 | 16,110,000 | 527,120 | 4983.3 | 32.3 |
| Account 10* | 16.7 | 8,120,000 | 721,210 | 2,517.6 | 34.5 |

**Table 2:** Table 2 displays the analysis of the top 10 accounts from table 1a based on occupation.

Table 2. “Tik-Tok Video Data of Top 10 Accounts”

| **Account Owner Occupation** | **Average Engagement Score (SD)** | **Average # of Total Videos (SD)** | **Average # of Informational Videos (SD)** | **Average # of Videos With Tik Tok Verified Paid Sponsorship (SD)** |
|---|---|---|---|---|
| Dermatologists | 21.66 (5.40) | 795 (562.84) | 691.22 (497.71) | 18.22 (23.95) |
| Medical Clinics | 32.96 (14.54) | 402.25 (243.48) | 327 (274.68) | 0 |
| Aestheticians | 26.47 (21.88) | 478 (238.58) | 316.5 (171.99) | 3.17 (2.56) |
| Med Spas | 15.77 (2.39) | 279.5 (19.09) | 199.5 (13.43) | 0 |

## Discussion

There is a high volume of dermatology content produced and consumed on the platform TikTok. Prior research demonstrates that consumer trust in TikTok content is high.[3] However, this study reveals that the TikTok videos of the most productive content creators in dermatology are of poor educational accuracy and quality. Physicians should be aware of the expanding role of social media platforms as a source of medical information and possible misinformation. Dermatologists should consider if they have an obligation to produce content that is unbiased, ethical, and accurate.

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