

# Evaluating Quality and Reliability of Most-Viewed TikTok Videos About Spironolactone

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## INTRODUCTION

Engagement with social media has become increasingly prevalent in today's digital age.

Among the many social media platforms available in the United States, surveys have shown that 58% of teenagers use TikTok at least daily, and 56% of adults ages 18 to 34 years use TikTok.<sup>1,2</sup> With the wealth of content offered on TikTok, young people are turning to this medium to seek guidance on various health-related topics, including information about acne and acne medications. While the platform's popularity positions TikTok as a beacon of dermatologic education, the dermatologic information about acne on social media is often wrought with misinformation.<sup>3</sup>

Spironolactone is a hormone-based diuretic that is effective in the treatment of hormonal acne in women, as well as androgenetic alopecia and hidradenitis suppurativa, where it has shown efficacy in reducing symptoms.<sup>4,5</sup> Overall, spironolactone is well-tolerated and safe in healthy patients.<sup>6,7</sup> Previous research characterized the type of information discussed in spironolactone videos on TikTok, the most common being educational information about spironolactone

and side effects of the medication.<sup>8</sup> However, the quality and reliability of TikTok videos about spironolactone have not been assessed. Given the wide viewership of TikTok videos created with the hashtag, #spironolactone, we sought to evaluate the quality and reliability of these videos.

## MATERIALS AND METHODS

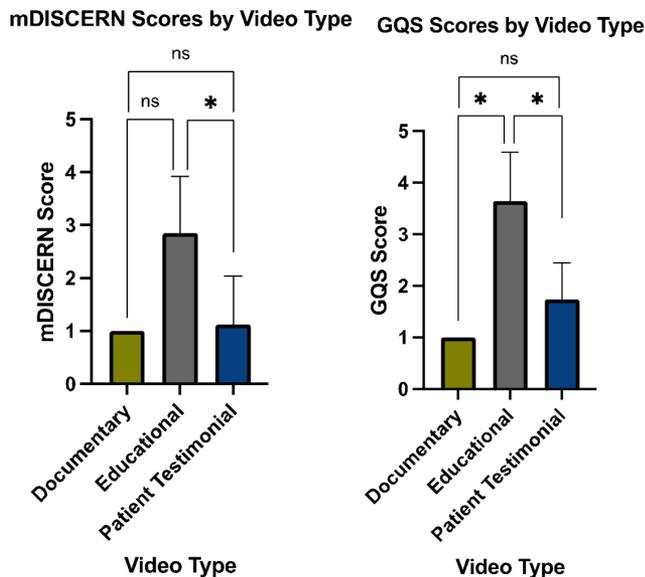
A new TikTok account was created to minimize algorithmic influence on recommended videos. A TikTok search was conducted on December 11, 2023, using the hashtag "#spironolactone." At the time, videos linked to "#spironolactone" had a cumulative 108.0 million views. The top 50 videos were retrieved from the "Top" tab and included in the analysis. Two independent researchers viewed the videos and assigned scores using the modified DISCERN (mDISCERN) score and Global Quality Scale (GQS) criteria.<sup>9</sup> The mDISCERN tool measures the reliability of health information and the GQS criteria evaluates the quality of health information (Table 1). Both tools have a possible total score of 5, with a higher score indicating higher reliability or quality, respectively. Assigned scores were averaged for each video. Analyses were conducted using one-way ANOVA and unpaired t-tests.

TABLE 1.

mDISCERN and GQS Scoring Criteria	
Modified DISCERN Score (mDISCERN)	
Item	Question
I.	Are the aims clear and achieved?
II.	Are reliable sources of information used? (i.e. publication cited, speaker is a medical specialist regarding spironolactone)
III.	Is the information presented balanced and unbiased?
IV.	Are additional sources of information listed for patient reference?
V.	Are areas of uncertainty mentioned?
Scoring: One point is awarded for every "yes" and zero points are awarded for every "no"	
Global Quality Scale (GQS) Criteria	
Item	Question
I.	Poor quality, poor flow, most information is missing, not at all useful for patients
II.	Generally poor quality and flow, some information listed but many important topics are missing, of limited use to patients
III.	Moderate quality, some important information is adequately discussed but other information is poorly discussed, somewhat useful for patients
IV.	Good quality, good flow, most relevant information is covered, useful for patients
V.	Excellent quality and flow, very useful for patients

Scoring: A score of 1-5 is assigned based on the above criteria.

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**FIGURE 1.** mDISCERN and GQS scores by video type.

Mean and standard deviation mDISCERN and GQS scores by video type. mDISCERN and GQS scores were compared by video type using one-way ANOVA, followed by unpaired t-tests. \* represents significance  $P < 0.05$ .

## RESULTS

Of these top 50 videos, 39 were patient testimonials (78%), 10 were educational (20%), and 1 was a documentary (2%). Eight of the 10 educational videos were made by dermatologists. Each video type category had a mean of over 200,000 views. Educational videos had the highest average number of views (370,828), although the range of views varied greatly (SD = 524,016), followed by documentary (264,200 ± 0) and then testimonial (220,627 ± 19,032) videos. Cumulative average scores for all videos were 1/5 (SD=1) on the mDISCERN scale and 2/5 (SD=1) on the GQS scale. For reliability scoring, average mDISCERN scores by video type were 3/5 (SD =1) for educational, 1/5 for documentary (SD=0), and 1/5 (SD=1) for patient testimonials. There was a significant difference in mDISCERN scores of testimonial videos ( $P < 0.001$ ) compared to educational videos. For quality scoring, average GQS scores by video type were 4/5 (SD=1) for educational, 2/5 (SD=1) for patient testimonials, and 1/5 (SD=0) for documentary. There was a significant difference in GQS scores for documentary videos ( $P = 0.0254$ ) and testimonial videos ( $P < 0.001$ ) compared to educational videos (Figure 1).

## DISCUSSION

Our results highlight the common use of TikTok as a space for narrative medicine regarding spironolactone for acne treatment, with the top 50 spironolactone videos having over 100 million views. Despite this high level of interest, our study found that the top 50 spironolactone videos on TikTok had overall

poor reliability and quality, which is a significant issue given the platform's popularity and the potential impact on patient decision-making. Educational videos, 8/10 of which were made by dermatologists, had the highest quality and reliability. These results are consistent with a previous study that showed board-certified dermatologists were the largest source of educational videos about common dermatologic conditions on TikTok, and that these videos had a significantly higher probability of being reliable compared to videos made by non-dermatologists.<sup>10</sup>

While our study found that a significant majority of videos (78%) about spironolactone were patient testimonials, Nguyen et al observed a lower prevalence of patient-made content among the top 10 dermatologic diagnoses and procedures, with only 45% of TikTok videos being created by patients in their analysis.<sup>11</sup> Given that spironolactone is widely used to address one of the most common inflammatory skin diseases, acne, it is likely that this broad usage contributes to the high volume of content and patient testimonials on TikTok. This introduces a potential numbers bias, where the prevalence of videos may be more reflective of the widespread use of the drug rather than the quality of information being shared compared to other common dermatology topics. It is important to note, however, that despite comprising the majority of videos, patient testimonials had the poorest quality and reliability in our study. This is in contrast with a previous study about acne-related TikTok content, where personal narrative videos had the highest reliability among video types.<sup>12</sup> While the high volume of personal stories about spironolactone can provide relatable insights for those considering using the medication, the relatively lower quality and reliability scores of these testimonials emphasize a significant risk of misinformation. For example, one video claimed spearmint tea is equally as effective as spironolactone in the treatment of acne. Others discussed their self-discontinuation and re-initiation of spironolactone without consulting their dermatologists. Discussions of side effects varied, but some cited depression and anxiety, which have not previously been shown as adverse effects of spironolactone.<sup>13</sup>

Despite the abundance of patient testimonials, educational videos, which were predominantly made by dermatologists, still garnered the highest average number of views. It is worth noting that although educational videos were the highest quality and most reliable, no videos scored the maximum score of 5 on the mDISCERN and GQS scales. The majority of videos did not mention areas of uncertainty and did not cite additional sources of information for patient reference. While research publications and other online patient education materials would be remiss not to include these points, the nature of short-form TikTok videos made with the intention of virality may not allow discussions of doubt and further reading materials. For dermatologists creating social media videos, it would be beneficial to include

additional materials for viewers to reference when able. For example, references can be added to caption links, or studies can be mentioned in on-screen text bubbles. Furthermore, the development of best practices or a consensus statement by a professional society could help establish standardized guidelines for dermatologists and other healthcare providers when creating educational content for social media. This would ensure that the information shared is both accurate and accessible, reducing the risk of misinformation while enhancing patient education.

Given the high percentage of patient-made videos, our findings point to a critical need for comprehensive counseling by healthcare providers about spironolactone.<sup>14</sup> Dermatologists should be proactive in discussing the realities of spironolactone treatment with their patients. This includes addressing potential misconceptions that patients may encounter online, especially from popular but potentially unreliable TikTok videos. If patients watch poor quality or unreliable videos after their medical visit, they may decide not to start spironolactone, possibly leading to further dyspigmentation and scarring from acne. Providing clear, evidence-based information during consultations can empower patients to navigate social media content more critically and make informed decisions about their treatment.

## CONCLUSION

While TikTok offers a significant platform for disseminating information about spironolactone, particularly in the context of acne treatment, our study reveals a concerning gap in the quality and reliability of this content. Despite the platform's potential for widespread educational impact, the predominance of low-quality patient testimonials highlights the risk of misinformation, which could adversely affect patient decision-making and health outcomes. Educational videos produced by dermatologists show promise in providing accurate information, but there is a need for greater consistency and thoroughness, including the citation of sources. These findings underscore the importance of developing standardized guidelines for healthcare providers engaging with social media, as well as the critical role of comprehensive counseling in clinical settings. By addressing these gaps, dermatologists can better leverage platforms like TikTok to support patient education, reduce the spread of misinformation, and ultimately improve patient care in the digital age.

## DISCLOSURES

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