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Gender-Affirming Surgery

Evaluating the Quality and Reliability of Gender-affirming Surgery Videos on YouTube and TikTok

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Background: Social media platforms have changed the way medical information is disseminated. Transgender patients may utilize social media to learn about gender-affirming surgery (GAS). Although videos on social media are readily accessible, their content is not verified or peer-reviewed. Therefore, this study aimed to evaluate the quality and reliability of YouTube and TikTok videos related to GAS.

Methods: YouTube and TikTok were queried for gender-affirming top surgery, metoidioplasty, phalloplasty, breast augmentation, and vaginoplasty. Quality of video content was analyzed by the DISCERN scale. Quality scores were compared among the type of GAS, account user, and content category.

Results: There were 275 YouTube videos and 55 TikTok videos. Most videos focused on masculinizing top surgery ($P < 0.001$). Overall, videos on masculinizing GAS had higher quality and reliability than videos on feminizing GAS ($P < 0.001$). Chest surgery videos were of higher quality than those on genital surgery ($P \leq 0.001$). Videos on masculinizing top surgery had the highest quality, whereas vaginoplasty had the lowest quality and reliability ($P < 0.001$). Videos produced by health care professionals and academic institutions had the greatest quality and reliability, respectively ($P < 0.0001$), whereas videos produced by patients were the least reliable ($P < 0.0001$).

Conclusions: Videos on GAS ranged from poor to good quality and reliability. Health care professionals, especially plastic surgeons, should create high-quality videos on social media to educate transgender patients. There should also be greater efforts in disseminating existing high-quality videos on social media. Resources posted on social media platforms can reach a wide audience through accessible means. *(Plast Reconstr Surg Glob Open 2022;10:e4443; doi: 10.1097/GOX.0000000000004443; Published online 28 July 2022.)*

INTRODUCTION

Social media platforms have changed the way medical information is disseminated and communicated among inquisitive laypersons, patients, and health care providers.[1] Social media applications (apps) can deliver information to a wide audience in a quick and accessible way.[2] In 2021, there were 4.48 billion people actively using social media in the world, representing a 13.1% increase from 2020.[3] Social media platforms that primarily house videos, such as TikTok (TikTok Inc) and YouTube (YouTube Inc), provide accessible and direct information to viewers. Founded in 2016, TikTok houses short videos, usually less than a minute long, while YouTube videos can be much longer.[4] There is no question on how widely these social media are used: TikTok has over 1 billion monthly active users and YouTube has over 2.2 billion.[5,6]

Thus, it is no surprise that medical professionals, including physicians, have started using social media to improve patient knowledge and promote their own practices. Potential patients also commonly consult social media before their initial consultation.[7–9] One benefit of using a popular social media platform is the ability to alleviate health inequity because information is readily accessible for historically marginalized patient populations. In particular, transgender patients have a unique set of health care needs, but are often discriminated against by

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Related Digital Media are available in the full-text version of the article on www.PRSGlobalOpen.com.

systemic and institutional barriers.[10–13] Thus, for transgender patients who do not have access to gender-affirming health care, social media platforms are a powerful way for transgender people to exchange knowledge, interact with health care professionals, and receive life-saving support from online communities.[10] However, the quality and reliability of content posted to social media are not verified or peer-reviewed.[9] With unverified content posted online, there are greater chances that a prospective patient will come across false information.

Previous studies have investigated the quality and reliability of social media content in select medical specialties, ranging from cataract surgery to bariatric surgery.[14,15] A recent study that evaluated YouTube content on gender-affirming chest surgery found low quality with very high bias.[16] However, the quality of content about gender-affirming genital surgery on YouTube and TikTok has not been evaluated. Given the increasing demand for gender-affirming genital surgery, it is critical to evaluate the content of these videos that are being widely disseminated to prospective patients.[17] Therefore, this study aimed to investigate the quality and reliability of various gender-affirming surgery (GAS) videos posted on the social media platforms, YouTube and TikTok, to improve future content creation for transgender patients.

METHODS

Study Design

An institutional review board was not needed as all data are publicly available online. This cross-sectional study evaluates the content of social medial videos. Online searches were performed on YouTube and TikTok to find videos related to GAS. The following five types of GAS were investigated: masculinizing top surgery, breast augmentation, metoidioplasty, phalloplasty, and vaginoplasty. Videos related to these procedures were chosen because these five procedures were the most commonly performed gender-affirming procedures according to the Truven MarketScan Database from 2009 to 2015 and were also mentioned in the World Professional Association for Transgender Health Standard of Care 7th Edition.[18,19]

Online Searches

From July to August 2021, YouTube and TikTok apps were queried with the following combinations of hashtags with colloquial and medical terminology: #(mastectomy or "top surgery") AND #(GAS or transmales or transmen), #(breast augmentation) AND #(GAS or transfemales or transwomen), #(metoidioplasty) AND #(GAS or transfemales or transwomen), #(phalloplasty) AND #(GAS or transfemales or transwomen), and #(vaginoplasty) AND #(GAS or transfemales or transwomen). All searches were performed using an incognito window on Google Chrome (Google Inc) with cleared caches and deleted cookies.

The first 50 YouTube and 25 TikTok videos were reviewed and screened for inclusion. Since YouTube has been around longer than TikTok, more YouTube videos were evaluated to include those going back to the creation of YouTube in 2005.[6] TikTok videos ranged from 2019 to 2021. Videos were excluded if they were advertisements, unrelated to GAS in any way, not in English, found to be deleted when trying to access the video at a later point, or did not have any audio and visual words. Duplicate videos during searches were also excluded. The number of search results for each search term was noted.

Data Collection

The following data were recorded for each video: upload date, type of account that uploaded the video (eg, plastic surgeon, non–plastic surgery physician, nonphysician health professional, company, hospital, patient, and other), number of likes, views, account followers, comments, and video length. Video content and type of user account were also coded into thematic categories. Video quality and reliability were evaluated by the DISCERN scale.[20]

DISCERN Scale

A modified version of the DISCERN scale, a 16-point validated scale divided into three sections that assesses the quality of written information, was utilized to evaluate the quality, bias, and reliability of the videos. The DISCERN scale produces the DISCERN reliability score, DISCERN quality score, and overall DISCERN score. Each score ranges from 1 to 5, with 5 being the highest quality information. The reliability score, an average of questions 1–8, addresses the reliability of the publication and whether it can be trusted.[18] The quality score, an average of questions 9–15, evaluates the specific details of the management options, such as benefits, risks, and impact on overall quality of life.[18] Question 16 is an overall quality score influenced by the ratings of the first 15 questions. DISCERN scores between 4.5 and 5 are considered excellent, 4.2–4.4 as very good, 3.4–4.1 as good, 2.6–3.3 as average, 1.9–2.5 as poor, and less than 1.8 as very poor.[1] Videos were reviewed by two of the authors, following the DISCERN Handbook.[1,20] To limit interrater variability, the reviewers performed a trial run of video scoring and discussed their scores to achieve similar internal rating metrics. The two reviewers are medical and graduate students

who perform extensive research on GAS and transgender health outcomes. They are also users of both social media apps used in the study.

Content Categories

Content categories included patient experience, patient education, physician education, operation, advocacy, and self-promotion. Videos focused on "patient experience" discussed experience with preoperative planning, perioperative care, postoperative care, and postoperative outcomes for the speaker of the video. "Patient education" focused on advice, tips, and precautions regarding preoperative, perioperative, and postoperative care. Videos categorized in "physician education" were didactics or conference presentations for physicians. "Advocacy" videos included news clips and presidential announcements regarding transgender rights. "Self-promotion" videos promoted the speaker's practice or product. Each video was assigned to one content category. Reviewers separately categorized the video content, then reconvened to discuss their coding.

Types of User Account

Types of account included patient, MD, health care center/group, non-MD health care professional, academic institution, academic society, medical journal, device company, and news. "Health care centers/groups" included private practices and hospitals. "Non-MD health care professionals" included chiropractors, psychologists, and occupational therapists. Accounts labeled as "academic society" were produced by national specialty organizations, such as the American Urological Society. Reviewers separately categorized the type of user account, then reconvened to discuss their coding.

Statistical Analysis

Descriptive statistics were generated using Microsoft Excel (Microsoft Corporations, Redmond, WA) and GraphPad (GraphPad Inc., San Diego, CA). Means and standard deviations are shown for continuous variables. Frequencies and percentages are shown for categorical variables. Independent t-test was used to compare the DISCERN scores between the TikTok and YouTube videos. Analysis of variance was used to compare DISCERN scores among the various content categories, surgery type, and type of account. The Benjamin-Hochberg correction was also performed as a post-hoc analysis. P values less than 0.05 were considered statistically significant.

RESULTS

There were 275 YouTube videos and 55 TikTok videos that met our inclusion criteria. (**See table, Supplemental Digital Content 1**, which displays the flow chart showing identification of YouTube and TikTok videos according to search criteria, **http://links.lww.com/PRSGO/C109**.) (**See figure, Supplemental Digital Content 2**, which displays distribution of all combined YouTube and TikTok videos that were included in the study. Percentages represent number of included videos out of total searches for that GAS type, **http://links.lww.com/PRSGO/C110**.)

Given that YouTube and TikTok have distinct characteristics (eg, age of application, average length of videos), it is important to compare baseline characteristics of the two social media platforms to elucidate how their differences may impact the distribution of video content categories, types of account users, and number of videos for each GAS. Videos on masculinizing top surgery were the most common type of surgery for both social media platforms (34.6% for YouTube and 65.5% for TikTok, $P < 0.001$) (Table 1). YouTube had significantly more videos on feminizing GAS (ie, breast augmentation and vaginoplasty) than TikTok ($P < 0.03$). There were no TikTok videos on gender-affirming breast augmentation that met our inclusion criteria. There were no significant differences between YouTube and TikTok in the number of account subscribers. TikTok videos were significantly shorter and younger in time from publication than YouTube videos.

Content Categories

"Patient experience" and "patient education" were the most common types of YouTube videos for each GAS (44.9%–80%, $P = 0.03$). (**See figure, Supplemental Digital Content 3**, which displays distribution of content categories for YouTube videos (n = 275). Content categories include patient experience, patient education, physician education, operation, advocacy, and self-promotion. P value compares the distribution of videos in each category, **http://links.lww.com/PRSGO/C111**.)

"Patient experience" and "patient education" were the only two categories for the TikTok videos. (**See figure, Supplemental Digital Content 4,** which displays distribution of content categories for TikTok videos (n = 55). Content categories included patient experience and patient education. P value compares the distribution of videos in each category, **http://links.lww.com/PRSGO/C112**.)

Type of User Account

The three most common types of YouTube video accounts were patient (67.6%), MD (11.6%), and health care center/group (8.7%). (**See figure, Supplemental Digital Content 5**, which displays distribution of YouTube account user type (n = 275). Types of account users included patient, MD, health care center, academic institution, non-MD health care professional, medical journal, device company, academic society, and news, **http://links.lww.com/PRSGO/C113**.) Of the YouTube videos produced by MDs, 71.9% were posted by plastic surgeons. (**See figure, Supplemental Digital Content 6**, which displays distribution of MD specialty for MD YouTube accounts (n = 32). Specialties include plastic surgery, urology, gynecology, orthopedics, and unreported, **http://links.lww.com/PRSGO/C114**.) TikTok user accounts were either patient (89.1%) or MD (10.9%). All six MD TikTok videos were produced by plastic surgeons.

DISCERN Scores

Of the various types of GAS, top surgery had the highest overall and reliability scores (2.98 and 3.15, respectively), whereas vaginoplasty had the lowest overall and reliability

Table 1. Recorded Variables of YouTube and TikTok Videos according to the Type of GAS

Variable*	YouTube (Mean ± SD)	TikTok (mean ± SD)	P
Masculinizing top surgery			
No. videos (%†)	95 (34.6)	36 (65.5)	*<0.001*
Age of account (y)	2.8 ± 1.7	N/A‡	
No. account subscribers	382,241 ± 1,687,821	166,502 ± 172,317	0.4
Age of video (y)	8.1 ± 10.9	1.2 ± 0.5	*<0.001*
Length of video (min)	11.4 ± 14.8	0.5 ± 0.5	*<0.001*
No. likes	2771 ± 7550	14,469 ± 19,173	*0.02*
No. views	163,952 ± 447,597	N/A	
No. comments	317.4 ± 718.2	142.3 ± 186.6	0.2
DISCERN overall score	3.3 ± 1.1	2.1 ± 1.1	*<0.001*
DISCERN reliability score	3.3 ± 0.6	2.7 ± 0.4	*<0.001*
DISCERN quality score	3.3 ± 1.0	2.2 ± 0.7	*<0.001*
Metoidioplasty			
No. videos	58 (21.1)	15 (27.3)	0.3
Age of account (y)	2.4 ± 1.8	N/A	
No. account subscribers	98,452 ± 252,383	107,254 ± 162,892	0.9
Age of video (y)	8.7 ± 11.8	0.5 ± 0.4	*<0.001*
Length of video (min)	15.4 ± 13.4	28.5 ± 22.3	*0.005*
No. likes	2024 ± 4008	18,343 ± 20,701	0.09
No. views	168,789 ± 598,153	N/A	
No. comments	540.9 ± 2284.5	206.9 ± 198.7	0.9
DISCERN overall score	2.6 ± 0.9	2.2 ± 1.0	0.1
DISCERN reliability score	3.2 ± 0.6	2.9 ± 0.3	*0.03*
DISCERN quality score	3.5 ± 0.6	1.9 ± 0.9	*<0.001*
Phalloplasty			
No. videos	40 (14.6)	1 (1.8)	*0.009*
Age of account (y)	2.4 ± 1.8	N/A	
No. account subscribers	30,723 ± 136,708	20,200	0.9
Age of video (y)	8.7 ± 19.0	1.2	0.7
Length of video (min)	19.4 ± 50.3	1.0	0.7
No. likes	1342.6 ± 3181.9	110,300	1.0
No. views	161,666 ± 508,967	N/A	
No. comments	187 ± 420.1	996	0.06
DISCERN overall score	2.1 ± 0.7	3	0.2
DISCERN reliability score	3.0 ± 0.5	2.6	0.5
DISCERN quality score	3.3 ± 0.6	2.9	0.5
Breast augmentation			
No. videos	33 (12)	0	
Age of account (y)	2.2 ± 1.5	—	
No. account subscribers	39,785 ± 65,354	—	
Age of video (y)	7.3 ± 3.5	—	
Length of video (min)	11.1 ± 10.4	—	
No. likes	1667 ± 3163	—	
No. views	154,716 ± 314,519	—	
No. comments	427.9 ± 873.2	—	
DISCERN overall score	2.5 ± 1.1	—	
DISCERN reliability score	3.0 ± 0.5	—	
DISCERN quality score	4.1 ± 3.3	—	
Vaginoplasty			
No. videos	49 (17.8)	3 (5.5)	*0.02*
Age of account (y)	2.9 ± 2.6	N/A	
No. account subscribers	43,340 ± 113,692	5463 ± 1330	0.17
Age of video (y)	8.6 ± 3.2	0.8 ± 0.5	*<0.001*
Length of video (min)	8.8 ± 6.9	0.3 ± 0.1	*<0.001*
No. likes	1417.8 ± 2722.2	44,557 ± 67,944	0.87
No. views	246,270 ± 557,992	N/A	
No. comments	238.1 ± 444.7	2351 ± 3865	0.87
DISCERN overall score	2.0 ± 0.8	2 ± 1	0.97
DISCERN reliability score	2.9 ± 0.6	2.6 ± 0.5	0.4
DISCERN quality score	2.8 ± 0.7	2.3 ± 0.3	0.3

*Averages of the specified variable are presented.
†Percentages are of total YouTube and TikTok videos.
‡Age of account and number of videos were not publicly available for TikTok videos.
P values less than 0.05 were statistically significant.

scores (1.96 and 2.85, respectively) ($P < 0.05$) (Table 2). Phalloplasty had the highest quality score (3.24), whereas vaginoplasty, again, had the lowest quality score (2.67) ($P = 0.02$).

When videos are grouped by masculinizing surgery (ie, top surgery, metoidioplasty, and phalloplasty) and feminizing surgery (ie, breast augmentation and vaginoplasty), masculinizing surgery videos had higher quality and reliability scores than feminizing surgery videos ($P < 0.001$).

When videos are grouped by chest surgery (ie, top surgery and breast augmentation) and genital surgery (ie, metoidioplasty, phalloplasty, and vaginoplasty), videos on chest surgery had higher quality and reliability scores than those on genital surgery ($P ≤ 0.001$).

Videos posted by non-MD health care professionals had the highest overall score, whereas academic societies had the lowest overall score (4 versus 2, $P = 0.001$). Videos created by academic institutions had the greatest reliability, whereas videos produced by patients had the lowest

Table 2. Analysis of DISCERN Scores for All Videos Included in This Study

Variable (no.)	DISCERN* Overall Score (Mean ± SD)	DISCERN Reliability Score (Mean ± SD)	DISCERN Quality Score (Mean ± SD)
Type of GAS			
Top surgery (131)	2.98±1.2	3.15±0.6	2.97±1.0
Metoidioplasty (73)	2.51±0.9	3.15±0.6	3.13±0.9
Phalloplasty (41)	2.13±0.7	2.98±0.5	3.24±0.6
Breast aug (33)	2.53±1.1	3.02±0.5	3.04±0.9
Vaginoplasty (52)	1.96±0.8	2.85±0.6	2.67±0.7
P value	*<0.0001*	*0.02*	*0.02*
Type of GAS			
Masculinizing† GAS (245)	2.85±1.1	3.22±0.6	3.32±0.8
Feminizing‡ GAS (85)	2.18±1.0	2.95±0.5	2.87±0.8
P value	*<0.001*	*<0.001*	*<0.001*
Type of GAS			
Chest surgery§ (164)	3.11±1.2	3.27±0.6	3.20±1.0
Genital surgery¶ (166)	2.25±09	3.06±0.6	3.15±0.7
P value	*<0.001*	*0.001*	*0.6*
Type of user account			
Patient (235)	2.48±1	2.99±0.5	3.04±0.9
MD (38)	2.75±1.2	3.01±0.5	2.84±0.9
Healthcare group (24)	2.17±0.9	3.03±0.7	2.82±0.8
Non-MD‖ (10)	4±1.3	3.56±0.7	3.24±0.6
Academic institution (13)	3.14±1.5	3.89±0.9	3.29±1.0
Medical journal (4)	2.33±1.2	3.5±1	2.38±0.8
Device company (3)	3.5±1	3.69±0.6	2.93±1.1
Academic society (2)	2±1.7	3.33±0.4	2.81±1.5
P value	*0.0001*	*<0.0001*	*0.5*
Type of video category			
Patient experience (191)	2.43±1.0	2.98±0.5	3.02±0.9
Patient education (78)	2.73±1.2	2.16±0.6	2.92±0.9
Physician education (16)	3.64±1.2	4.19±0.7	3.62±0.8
Operation (21)	2.39±1.1	2.88±0.3	2.63±0.9
Advocacy (2)	2.5±0.7	3.31±0.6	3±0.4
Self-promotion (2)	2	3	2.71±0.8
P value	*0.001*	*<0.001*	*0.04*
Social media platforms			
YouTube (275)	2.63±1.1	3.13±0.6	3.17±0.8
TikTok (55)	2.14±1.0	2.76±0.4	2.15±0.8
P value	*0.003*	*<0.001*	*<0.001*

*DISCERN scores are for both YouTube and TikTok videos, unless specified otherwise.
†Masculinizing GAS includes top surgery, metoidioplasty, and phalloplasty.
‡Feminizing GAS includes breast augmentation and vaginoplasty.
§Chest surgery refers to top surgery and breast augmentation.
¶Genital surgery refers to metoidioplasty, phalloplasty, and vaginoplasty.
‖Non-MD refers to non-MD health care professionals.

reliability (3.89 versus 2.99, $P < 0.0001$). Overall, YouTube videos had significantly higher reliability and quality than TikTok videos ($P \leq 0.003$) (Table 2).

DISCUSSION

Our study, which is the first to evaluate the video quality and reliability of various types of GAS on two popular social media apps, shows that YouTube and TikTok videos on GAS range from poor to average quality and reliability. Although videos produced by health care professionals and academic institutions were of the highest quality, these are the minority of videos. With a 14.4% annual growth rate of gender-affirming procedures performed each year, it is crucial that health care providers, including plastic surgeons, develop high-quality, reliable patient educational videos for this growing patient population and promote visibility for high-quality social media content.[17]

The impact of social media should not be underestimated. A previous survey study revealed that 9% of patients were influenced by YouTube videos when choosing a plastic surgery practice, and most patients were very interested in short educational videos.[21] With the average person spending 2 hours on social media apps per day, social media platforms are becoming invaluable resources for networking and information gathering, especially for vulnerable populations.[9] In particular, transgender people may utilize social media as a safe haven from ongoing discrimination faced in-person and as a space to freely express their gender identity.[10] Transgender patients may also use social media as a vehicle to document their gender transitions and advocate for transgender health.[22]

Although YouTube and TikTok provide various benefits to patients, there is little regulation on content qualifications. Uploaded videos are not peer-reviewed. According to Om et al, social media videos can generate misinformation and equip patients with misleading impressions of surgical care even before their initial consultation.[1] Therefore, previous studies have investigated the quality of online social media videos.[23-25] In 2020, Ayyala et al[16] reported low overall average DISCERN scores for YouTube videos on gender-affirming top surgery and breast augmentation, with the majority of videos focusing on the patient experience. Our study expands on that work by evaluating gender-affirming genital surgery and assessing videos on TikTok, a newer and more trending social media app.[5,16] Like Ayyala et al, we found low

overall DISCERN scores for videos on chest surgery, but also found even lower scores for videos on genital surgery, which further elucidates the poor quality and reliability of available social media resources for potential patients. Content creators who have been shown to produce higher quality videos, such as physicians and other health care professionals, should not only create more videos on genital surgery to improve the current landscape of available online educational resources, but also increase publicity for their work.[9]

In our study, videos on feminizing surgeries were of lower quality than those on masculinizing surgeries. This result may reflect greater societal influences. In the United States, 55.2% of gender-affirming procedures are performed for transgender men, and there are twice as many transgender men than women.[17,18,26] As stated by Bockting et al,[27] perhaps this demographic discrepancy is due to greater societal stigma in transitioning to women than men.[28] With more transgender male patients and providers who care for transgender men's health, it may be less surprising that content on masculinizing GAS has greater quality since masculinizing procedures are more commonly performed. Therefore, to combat this inequity of health care information, greater efforts should be made to increase visibility and distribution of high-quality work produced by health care professionals for patients interested in feminizing GAS. Access to educational content on feminizing GAS could encourage more prospective patients to pursue these life-changing procedures.

In addition to creating more high-quality videos by health care providers, greater efforts should be made to increase the visibility and distribution of existing high-quality videos produced by physician and other health care provider accounts. First, appropriate hashtags can be written in each video's description box to increase searchability. The use of hashtags has been effective in increasing dissemination and online conversation on Twitter, another social media platform.[29–31]

Second, video thumbnails can be optimized to attract greater viewers. Video thumbnails allow viewers to see a quick snapshot of the video as they are browsing YouTube or TikTok.[32] Thumbnails that depict interesting images or information may attract more viewers. Third, captions and written text should be displayed on the video to provide greater accessibility. Sound and volume are not always available when watching videos, so viewers may have a better understanding of the video content if there are captions.[33] Having written text can also prompt viewers to pause in their scrolling and be more engaged with the video.[33]

We acknowledge that there are several limitations to this study. The DISCERN criteria, although frequently used in other studies to assess video quality, were initially created for written text.[1,16,34,35] There could be potential review bias when scoring each video; however, reviewers performed a trial run of video scoring and discussed their scores to limit interrater variability. We acknowledge that videos on YouTube and TikTok are primarily for commercial and entertainment purposes, and therefore, do not necessarily need to be reliable or of high educational quality. Given that YouTube was created in 2005 and TikTok was created in 2016, time from publication is also a possible confounder for the statistical analysis. Another limitation is that we only analyzed videos produced in English, so videos in other languages may differ in quality or reliability. Video searches will also shift over time as more videos get uploaded to these apps.[14]

We acknowledge that academic journals possess high-quality educational material. However, the general population and underserved patients may not have access to academic articles. Patients also have varying levels of health literacy, so academic journals may not necessarily be accessible as patient educational materials. Social media apps are becoming more popular and should be acknowledged as an avenue for patient education. Regardless, this study is the first to compare the video quality of multiple types of GAS to guide future content on major social media apps for this marginalized patient population. Future research should perform a needs assessment to determine what content is most helpful to patients.

CONCLUSIONS

In conclusion, as social media platforms become more pervasive, it is concerning that current videos on GAS are of poor quality with questionable validity. Greater efforts should be made to promote the dissemination of high-quality videos on GAS as social media can be an important resource for prospective patients. We acknowledge that proper diagnosis and management of gender dysphoria should still be directed by trained, licensed health care professionals. When created correctly, content on social media can improve patient knowledge, affect health-related behaviors, promote evidence-based medicine, and ease patient anxiety in real time.[35]

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