# Ophthalmology: Popular ophthalmology hashtags as an educational source for ophthalmologists, an Instagram study

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Purpose: This study aims to determine the content and intent of posts published under popular ophthalmology hashtags and to determine whether these posts were educational for ophthalmologists.

Methods: A web-based, cross-sectional study design was used to evaluate the top public posts of five popular hashtags on three consecutive days by two ophthalmology specialists. The first 100 relevant English posts of each hashtag were studied. Selected hashtags were #Ophthalmology, #ophthalmosurgery, #ophthalmologyresident, #ophthalmologist, and #ophthalmicmicrophotography. Posts were classified according to the type of post, post author, post intent, and whether the post was educational. Posts deemed educational were then categorized separately using the same classification system as above to determine whether there were defining characteristics of educational posts.

Results: One thousand posts were recorded and analyzed and a total of 500 posts were included in the study. The majority of posts 79.8% (n = 399), were by medical doctors with 95% (n = 379) being ophthalmology specialists. Sixty-three percent of posts (n = 315) were deemed educational, 25% promotional (n = 127), and 12% (n = 58) were entertainment posts. Medical retina (n = 119) and anterior segment (n = 90) were the most common subspecialties explored. Ophthalmic photography (P = 0.001) was the hashtag with the highest number of educational posts (n = 91). The least educational hashtag was #ophthalmologist with only 44% of posts (n = 44) that were deemed to be educational. One hundred percent of glaucoma posts (n = 19), 98% of cornea posts (n = 41), and 99% of medical retina posts (n = 118) were found to be educational which was significantly more educational than the other topics posted (P ≤ 0.001). Conclusion: Ophthalmologists are the main authors of posts in popular ophthalmology hashtags. The majority of posts were educational posts with promotional posts being the second most common intent. The authors conclude that while Instagram is a possible source of ancillary education for the visual specialty of ophthalmology, careful selection of hashtags and post authors are needed for maximum benefit.

Key words: COVID-19, education, hashtag, Instagram, ophthalmology

Social media is changing the face of medicine: It allows for exponential sharing of information with an increased doctor–doctor, doctor–patient, and patient–patient interaction.[8] Twitter, YouTube, Instagram, and Facebook are popular applications that have been used for education.[5] With the implementation of the free open-access movement, doctors from all over the world can share their knowledge and experiences.[3] Just as patients use social media to find and select a doctor, ophthalmologists and ophthalmologists in training “follow” doctors that they consider authors in their field.[4] The coronavirus disease 2019 (COVID-19) pandemic has affected the education of ophthalmologists resident and ophthalmologists alike.[4,8] To keep up with the changing face of education in this pandemic era, some doctors, as well as institutions, have turned to web-based learning and social media to fill the gap.[2,4–13] The use of social media daily by many medical specialties has been documented and many institutions have managed to integrate it into medical education curricula.[4,10] Twitter hosts virtual case conferences, journal-based clubs, and “tweetorials” for education and sharing of information among medical professionals, Facebook groups are formed for learning opportunities and physician discussion, and YouTube enables sharing of videos of longer duration which teach complex procedures.[4]

Instagram is unique in that it is an easy mode of sharing high-quality images as well as captions by patients, medical professionals, and commercial entities. Analysis of this unique form of social media is essential. It enables evaluation of patient perceptions, misinformation, misconceptions, promotional use, and possible educational value and can help us refine our use of this social media tool to benefit all involved.[9,25] While Instagram studies have been done in medical fields such as plastic surgery, dermatology, radiology, infectious diseases, cardiology, and orthopedics,[13–22] ophthalmology studies on Instagram are relatively few.[22–25]

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A recent study of the use of Instagram in plastic surgery residency programs showed a fast-increasing trend of incorporation with positive effects. [16] Chen et al. [17] surveyed the use of a educational Instagram account @globaldermie which allowed for sharing images between fellow dermatologists and found that this had educational value, especially for rare diseases. Huang et al. [18] performed an in-depth analysis of the top posts of 37 trending hashtags and found that educational content had the lowest engagement. Further analysis of the overall content and educational content of Instagram posts related to ophthalmology can help us target ways to improve physician education.

In this study, we aimed to determine the content and intent of posts in the five most popular hashtags and examine whether by following popular hashtags, Instagram could be a good ancillary source of education for ophthalmologists.

**Methods**

As the study contains only publicly available data, it did not require ethics committee approval. [15–17,23–25] The study adhered to the tenets of the Declaration of Helsinki. The Instagram (www.instagram.com) site was entered on June 27, 28, and 29, 2021 and data was recorded. Research into the most relevant times for posting was determined using sprout social which is a media administration and information tool; [26] as the best time to post on Instagram for healthcare was deemed to be Sunday 8–9 a.m. and Tuesday 8 a.m. to noon and 5–8 p.m. and the best days for healthcare are cited as Monday and Tuesday, we felt that the most relevant posts would be found by analyzing posts on these dates. [26] The first five hashtags that were suggested by Instagram when typing “ophthalmology” in the search box were selected: 1) #ophthalmology, 2) #ophthalmosurgery, 3) #ophthalmologyresident, 4) #ophthalmicphotography, and 5) #ophthalmologist. Similar to the methodology of previous studies, 1000 posts were analyzed, and after elimination, 500 posts were included in the study. [15–17,23–25] Screenshots of the 200 “top posts” together with their captions and information from the main page of the post author from each of the hashtags were saved in the picture gallery for further analysis. Hashtags were studied from the most popular to the least popular hashtag. Popular hashtags were defined as hashtags with the highest number of posts. Posts that were included in the study were English posts, deemed relevant to the hashtag. Hashtags were studied from the most to the least popular and repeat posts were excluded from the following hashtags, i.e., a post that was posted under both #ophthalmology and #ophthalmosurgery was only included under #ophthalmology. While 200 posts were recorded, we only included the first 100 relevant posts due to the high likelihood of one or more of these posts being displayed on the user’s feed. Our selection aimed to determine whether ophthalmologists looking for educational material in their feed or online would benefit from following popular hashtags. Posts were considered educational if they were relevant to the field of ophthalmology, could help health professionals with diagnostic or surgical skills, and had informative captions. Two ophthalmology specialists from two different cities then analyzed the “top” 100 posts, which matched the study criterion. Any incongruities in the analysis were resolved after discussion.

Each post was assessed according to the type of post (short video, picture, photograph, or written post), the purpose of the post (educational, self-promotional, or entertainment), the topic of the post (subspecialties of ophthalmology or miscellaneous), and the author of the post. As posts can be both educational and promotional, posts were defined as educational or promotional according to the methodology described in a previous study, i.e., posts that primarily focused on teaching (anterior segment images, fundus photos, videos of ophthalmological procedures, and question/answer posts) were categorized as educational while posts that referred to the author’s practice or institution either for self-promotion of the user, to promote a certain product or treatment or were labeled as “ads” were deemed promotional. [23]

Authors were categorized after analyzing each user’s Instagram profile and divided as follows: Optometrists, institutions, doctors, and others. Ophthalmologists, ophthalmology residents, and medical doctors were grouped under “doctor.” Medical institutions and other institutions were grouped as institutions, and users who did not fit into any of the above categories were classified as others. Authors of posts were then classified according to geographical location.

**Statistical analysis**

All analyses were performed using IBM SPSS Statistics for Windows, Version 25.0. Descriptive statistics were presented as numbers and percentages for categorical variables, mean, standard deviation, median, and minimum and maximum for numerical variables. For categorical variables, the Chi-square test, Pearson Chi-square test, and Fisher’s exact test statistics were used for multiple and pairwise group comparisons when the Chi-square condition was met. The statistical significance level was accepted as $P < 0.05$.

**Results**

A total of 1000 posts were examined, and the first 100 relevant posts from each hashtag were included in the study. Thus, a total of 500 posts were included in the study, with 647500 posts utilizing the hashtags included in the study. The most popular hashtag with the highest number of posts was #ophthalmology and the second popular hashtag was #ophthalmosurgery [Table 1].

The majority of posts, 79.8% ($n = 399$) were by medical doctors with 95% ($n = 379$) being ophthalmology specialists. The majority of authors were from USA ($n = 220$) 44% and the UK ($n = 93$) 19%. Education was the most common intent of posts 63% ($n = 315$), followed by promotional 25% ($n = 127$) and entertainment 12% ($n = 58$) posts. When divided into categories, the non-educational category had the highest number of posts ($n = 168$) followed by medical retina ($n = 119$), anterior segment ($n = 90$), cornea ($n = 42$), glaucoma ($n = 19$), vitreoretinal surgery ($n = 14$), and other ($n = 48$). Other consisted of uvea ($n = 14$), oculoplastic ($n = 12$), oncology ($n = 5$), strabismus ($n = 3$), refractive surgery ($n = 2$), orbit ($n = 2$), and optics ($n = 1$); the number of posts per subspecialty in posts that were educational is summarized in Fig. 1.

Photographs were the most frequent post type ($n = 452$) than videos ($n = 23$), written posts ($n = 16$), and pictures ($n = 9$), respectively. The most educational hashtag was #ophthalmicphotography ($n = 91$) ($P = 0.001$), followed by #ophthalmologyresident ($n = 71$), #ophthalmosurgery ($n = 65$), #ophthalmology ($n = 45$), while the least educational hashtag was #ophthalmologist ($n = 44$).
Glaucoma \((n = 19)\), cornea \((n = 41)\), and medical retina posts \((n = 118)\) 99% were found to be significantly more educational than the other subspecialties posted \((P \leq 0.001)\). Approximately, a third of posts using the ophthalmology \((n = 34)\) and ophthalmologist \((n = 37)\) hashtags were promotional posts. Videos were the most educational post type \((n = 23)\) 100% followed by photos \((n = 280)\) 62%, written posts \((n = 9)\) 56%, and pictures \((n = 4)\) 44%. Doctors posted the most educational content \((n = 272)\) followed by institutes \((n = 29)\), optometrists \((n = 12)\), and other \((n = 3)\).

All the posts categorized according to authors, topics, post type, and purpose are summarized in Table 2. The categorization of all educational posts is summarized in Table 3. The aim of the posts in each hashtag is noted in Table 4.

### Discussion

Instagram’s platform has rapidly grown within the last decade and the number of Instagram users has surpassed 1.07 billion, with users engaging on Instagram for an average of 30 min per day.\(^{27}\) Tsui et al.\(^{28}\) discussed the role of social media in ophthalmology and highlighted its potential use in academia. While academic institutes were shown to have a good social media presence on Twitter and Facebook, the use of Instagram in comparison was low. However, a 2018 study by Clarke et al.\(^{29}\) found that similar to other medical specialties, ophthalmology had a strong presence on both Twitter and Instagram. The recent increase in users on Instagram has surpassed expectations. A possible cause is believed to be the COVID-19 pandemic.\(^{4,5}\) The pandemic with its lockdowns and curfews has increased overall screen time and negatively affected physician education due to the cancelation of local, national, and international conferences, educational meetings, decreased physician interaction, and more stringent patient care. To keep up with the changing face of education in this pandemic era, changes need to be made and a steady shift towards web-based learning and social media usage has been seen.\(^{4,5}\) Academic departments in the United States have increased their social media presence with many academic programs integrating social media into trainee education.\(^{20,21,26}\)

As the information on social media is not strictly monitored, the quality of information and education has been questioned.\(^{27}\) On the other hand, social media is a powerful tool for the rapid dissemination of valuable information to a wide audience.

Instagram excels in visual-based interactions and learning and popular hashtags can be “followed” on Instagram. Instagram then uses an algorithm based on the user’s likes and interests to determine which posts will be displayed in the users’ feed. Top posts of popular hashtags followed are displayed in the user feed. These top posts are based on popularity, so Instagram not only tracks the number of views and likes but how much these have grown recently, which enables new posts to also be featured under top posts. A single post can remain popular for several days. When following a hashtag, only certain selected posts will end up in the user’s main feed, therefore a higher percentage of educational posts would ensure viewing of educational content. Although all social media platforms rapidly share information, the way that Instagram is set up, i.e., short posts with pictures, videos, and written information, enables users to quickly scan posts and read or watch any that are of interest.

In a study of the use of social media among ophthalmologists and trainees in Nigeria, they found that 14.8% used social

### Table 1: Hashtags listed according to popularity and number of posts per hashtag

| Hashtag                        | Number of posts |
|-------------------------------|-----------------|
| #Ophthalmology                | 429000          |
| #Ophthalmologist              | 188000          |
| #Ophthalmologyresident        | 15300           |
| #Ophthalmicphotography        | 10200           |
| #Ophthalmosurgery             | 5000            |

### Table 2: Subspecialties listed according to the number of posts

| Subspecialty | Number of Posts |
|--------------|-----------------|
| Medical Retina | 118             |
| Anterior segment | 81              |
| Cornea | 41             |
| Glaucoma | 19             |
| Uvea | 14             |
| Vitreoretinal surgery | 11          |
| Oculoplastics | 10             |
| Oncology | 5              |
| Strabismus | 3              |
| Refractive surgery | 2              |
| Orbit | 2              |
| Optics | 1              |

### Figure 1: A breakdown of the educational posts according to subspecialties
media for educational purposes with only 4.2% using it for promotional purposes. This study highlighted the potential of social media in ophthalmic education as early as 2016. Although many ophthalmological studies have examined YouTube and Twitter as a source of education, studies regarding Instagram as well as studies regarding physician and health provider education are relatively few. Sixty-three percent of the “top” posts were found to be educational leading us to believe that Instagram has the potential to be a good ancillary source of education. Ninety percent of posts were photos of which approximately 62% were educational.

Ophthalmology is a specialty in which high-quality imaging can be easily shared, anterior segment, cornea, retina, and ocuoplastics are just a few of the subspecialties in which sharing of photos has the potential to be educational. However, photos can also be used for promotional purposes and advertising, evidenced by a large number of promotional posts analyzed. Similar to our study in a study by Huang et al., on the content of ophthalmology hashtags on Instagram, they found that the majority of post authors were ophthalmologists (35%), the most common post intent was educational (56%) and the most common post type was a photo (82%).

When educational posts were examined separately, doctors were again the most common author, photos were the most common type of post, and medical retina was the most regularly posted topic (37%) with anterior segment photos a close second (26%). Despite a large number of posts on these topics, the analysis showed that in addition to medical retina posts, posts related to cornea and glaucoma were significantly

### Table 2: Hashtags classified according to authors, posts, purpose, topic, and educational percentages

|                      | n  | %    | Educational (Yes) | Educational (No) | P       |
|----------------------|----|------|-------------------|------------------|---------|
| **Author**           |    |      |                   |                  |         |
| Doctor               | 399| 79.8 | 272 (68%)         | 127 (32%)        | ≤0.001  |
| Optometrist          | 40 | 8    | 12 (30%)          | 28 (70%)         |         |
| Institute            | 50 | 10   | 29 (58%)          | 21 (42%)         |         |
| Other                | 11 | 2.2  | 3 (27%)           | 8 (73%)          |         |
| **Post type**        |    |      |                   |                  |         |
| Photo                | 452| 90.4 | 280 (62%)         | 172 (38%)        | 0.002   |
| Post                 | 16 | 3.2  | 9 (56%)           | 7 (44%)          |         |
| Picture              | 9  | 1.8  | 4 (44%)           | 5 (56%)          |         |
| Video                | 23 | 4.6  | 23 (100%)         | 0 (0%)           |         |
| **Purpose**          |    |      |                   |                  |         |
| Education            | 324| 64.8 | 310 (96%)         | 14 (4%)          | ≤0.001  |
| Entertainment        | 46 | 9.2  | 4 (9%)            | 42 (91%)         |         |
| Promotional          | 130| 26   | 2 (1.5%)          | 128 (98.5%)      |         |
| **Topic**            |    |      |                   |                  |         |
| Vitreoretinal        | 14 | 2.8  | 11 (79%)          | 3 (21%)          | ≤0.001  |
| Medical retina       | 119| 23.8 | 118 (99%)         | 1 (1%)           |         |
| Anterior segment     | 90 | 18   | 81 (90%)          | 9 (10%)          |         |
| Non-educational      | 168| 33.6 | 5 (3%)            | 163 (97%)        |         |
| Glaucoma             | 19 | 3.8  | 19 (100%)         | 0 (0%)           |         |
| Cornea               | 42 | 8.4  | 41 (98%)          | 1 (2%)           |         |
| Other                | 48 | 9.6  | 46 (96%)          | 2 (4%)           |         |

### Table 3: Educational posts shown according to author, post type, hashtag, and topic

|                      | n  | %    |
|----------------------|----|------|
| **Author**           |    |      |
| Doctor               | 272| 86.1 |
| Optometrist          | 12 | 3.8  |
| Institute            | 29 | 9.2  |
| Other                | 3  | 9    |
| **Post type**        |    |      |
| Photo                | 280| 88.6 |
| Post                 | 9  | 2.8  |
| Picture              | 4  | 1.3  |
| Video                | 23 | 7.3  |
| **Topic**            |    |      |
| Vitreoretinal        | 11 | 3.5  |
| Medical retina       | 118| 37.3 |
| Anterior segment     | 81 | 25.6 |
| Glaucoma             | 19 | 13   |
| Cornea               | 41 | 6    |
| Other                | 46 | 14.6 |
| **Hashtag**          |    |      |
| #ophthalmology       | 45 | 13.9 |
| #ophthalmosurgery    | 65 | 20.9 |
| #ophthalmologyresident | 71 | 22.5 |
| #ophthalmicphotography | 91 | 28.8 |
| #ophthalmologist     | 44 | 13.9 |
more educational. Glaucoma and corneal diseases both have a genetic component with the consequences of late glaucoma diagnosis being irreversible. The fact that these posts were more educational could increase disease awareness, treatment, and early detection.

Of the 500 hashtags studied, 26% of posts were promotional, however, only 1.5% of these posts were educational. Of the five hashtags except for #ophthalmicphotography, at least a quarter to a third of posts was promotional. Therefore, promotional posts are unlikely to be educational to ophthalmologists and residents, even though they can possibly take up a quarter of one’s Instagram feed. Doctors, specifically ophthalmologists, posted the majority of educational posts, and although many doctors use Instagram for promotional purposes, the majority of posts were educational. When posts were compared according to post type, videos were significantly more educational ($P=0.002$). Only 4.6% of all posts studied were videos with 100% of these being deemed educational. Most videos were posted under #ophthalmosurgery and 96% of the posts in this hashtag were posted by doctors. Due to the intricate nature of most ophthalmological surgeries, short informative surgical videos can prove to be very educational as is seen in this study.

With developing technologies and access to high-quality images, images shared on Instagram can show diseases that are rarely encountered. Physicians can educate each other, help diagnose, and discuss treatment. Ophthalmologists could benefit from watching all videos in their feed and #ophthalmicphotography was the hashtag to follow. The majority of posts by ophthalmologists on Instagram were educational in intent. Thus, it seems that this specialty is utilizing Instagram for physician education ahead of promotional and entertainment purposes. Although most specialists update their education mainly by peer-reviewed publications, specialists in countries with low socioeconomic status might not have the same access to these articles. Social media is in a way a leveler whereby authors might be able to share publication findings and rarely seen cases. At the same time, ophthalmologists and residents can improve their surgical skills by gaining perspective and being exposed to new techniques.

**Limitations of our study**

As social media is fluid and dynamic in nature, our study represents only a snapshot in time, thus it might not give us a clear picture of future content. Prospective longitudinal studies of relevant hashtags could help us gain further insight into this important topic. Also, as Instagram allows users to “boost” their posts by paying for it, they can target a specific location and demographic which could lead to an increased number of promotional posts displayed on our feed, future studies of ophthalmology hashtags in two or more countries simultaneously could examine geographic differences/trends and help determine variances between user feeds according to location. Another limitation is that the popularity of the post author might be more influential in a post becoming a top post rather than content. Specific hashtags and following well-known authors and institutions might increase the likelihood of educational posts, as there are a lot of self-promotional, advertising-based posts as well as entertainment posts under certain hashtags such as ophthalmology that might fill up one’s Instagram feed unnecessarily. Further studies exploring the educational content of specific authors might shed more light on this matter. The strengths of our study are that this is the first study that examined a large number of posts of a few of the most popular ophthalmology hashtags on Instagram, and our study is unique in that it is the first to examine Instagram as an educational tool for ophthalmologists and ophthalmologists in training and may help us target specific hashtags to “follow.”

**Conclusion**

Ophthalmologists are the main authors of posts in popular ophthalmology hashtags. The majority of posts are aimed at education with self-promotion being the second most common intent. Instagram is a possible educational source for the visual specialty of ophthalmology, however careful selection of hashtags and post authors are needed for maximum benefit.

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**Conflicts of interest**

There are no conflicts of interest.

**References**

1. Vervaart P. Role of social media and the internet in education. EJIFCC 2012;23:24-7.
2. Latif MZ, Hussain I, Saeed R, Qureshi MA, Maqood U. Use of smart phones and social media in medical education: Trends, advantages, challenges and barriers. Acta Inform Med 2019;27:133-8.
3. Bansal A. Expanding Free Open-Access Medical Education, Front Med (Lausanne). 2021 Dec 23;8:794667. doi: 10.3389/fmed.2021.794667. PMID: 35004769; PMCID: PMC8734636.
4. Katz M, Nandi N. Social media and medical education in the context of the COVID-19 pandemic: Scoping review. JMIR Med Educ 2021;7:e25892.
5. Nilforushan N, Abolfathzadeh N. The impact of the COVID-19 pandemic on ophthalmology residency training. J Ophthalmic Vis Res 2021;16:312-3.
6. Tunçel-Kara M, Islam EA, Wang H, Pelley J, Nugent K. An interactive web-based project to stimulate internal medicine resident reading using board-type questions. Proc (Bayl Univ Med Cent) 2015;28:160-2.
7. Saenger AK, Berkwits M, Carley S, Haymond S, Ennis-O’Connor M,
Sherbino J, et al. The power of social media in medicine and medical education: Opportunities, risks, and rewards. Clin Chem 2018;64:1284-90.

8. Galiatsatos P, Porto-Carreiro F, Hayashi J, Zakaria S, Christmas C. The use of social media to supplement resident medical education - The SMART-ME initiative. Med Educ Online 2016;21:29332.

9. Chartier C, Chandawarkar AA, Gould DJ, Stevens WG. Insta-graded plastic surgery residencies: 2020 update. Aesthet Surg J 2021;41:372-9.

10. Yang SC, Wu BW, Karlis V, Saghezchi S. Current status of Instagram utilization by oral and maxillofacial surgery residency programs: A comparison with related dental and surgical specialties. J Oral Maxillofac Surg 2020;78:2128.e1-e7.

11. St Claire KM, Rietcheck HR, Patel RR, Dellavalle RP. An assessment of social media usage by dermatology residency programs. Dermatol Online J 2019;25:13030/qt5v62b42z.

12. Chen JY, Gardner JM, Chen SC, McMichael JR. Instagram for dermatology education. J Am Acad Dermatol 2020;83:1175-6.

13. Ko LN, Rana J, Burgin S. Incorporating social media into dermatologic education. Dermatol Online J 2017;23:13030/qt89c6h0j0.

14. Basa K, Spiegel JH. Facial plastic surgery on Instagram: What Is trending? What Is working? Aesthet Surg J 2021;41:846-51.

15. Dorfman RG, Vaca EE, Mahmood E, Fine NA, Schierle CF. Plastic surgery-related hashtag utilization on Instagram: Implications for education and marketing. Aesthet Surg J 2018;38:332-8.

16. Gupta N, Dorfman R, Saadat S, Roostaeian J. An updated review of plastic surgery-related hashtag utilization on Instagram: Implications for education and marketing. Aesthet Surg J Open Forum 2020;2:oja011.

17. Park JH, Christman MP, Linos E, Rieder EA. Dermatology on Instagram: An analysis of hashtags. J Drugs Dermatol 2018;17:482-4.

18. Rizkalla JM, Holderread B, Hotchkiss W, Clavenna A, Dossett A, Ogola GI, et al. Instagram and spine fusion: An analysis of social media and its relationship to patient perception of surgery. Global Spine J 2021;12:10211001814. Online ahead of print.

19. Agarwal N, Rahman A, Jacobs R, Taylor T, Muthiah N, Alan N, et al. Patient perception of scoliosis correction surgery on Instagram. Neurosurg Focus 2021;51:E6.

20. Shafer S, Johnson MB, Thomas RB, Johnson PT, Fishman EK. Instagram as a vehicle for education: What radiology educators need to know. Acad Radiol 2018;25:819-22.

21. Gauthier TP, Spence E. Instagram and clinical infectious diseases. Clin Infect Dis 2015;61:135-6.

22. Alasnag M, Mamas M, Fischman D, Brugaletta S, Safirstein J, Meier P, et al. View point on social media use in interventional cardiology. Open Heart 2019;6:e001031.

23. Huang AS, Abdullah AAN, Chen K, Zhu D. Ophthalmology and social media: An in-depth investigation of ophthalmologic content on Instagram. Clin Ophthalmol 2022;16:685-94.

24. Johnson A, Khan S, Koo EB. Social media and vision therapy: Perspectives of providers and patients on Instagram. J AAPOS 2021;25:166.e1-5.

25. Marques JP. Instagram as a vehicle to promote disease awareness and medical education in #retinaldystrophies. Postgrad Med J 2022;98:e167.

26. Arens E. The best times to post on social media in 2021. Sprout Social. Available from: https://sproutsocial.com/insights/best-times-to-post-on-social-media/. [Last accessed on 2021 Jun].

27. Systrom K. Instagram by the numbers: Stats, demographics & fun facts. OMNICORE Agency. Available from: https://www.omnicoreagency.com/instagram-statistics/. [Last accessed on 2021 Jun].

28. Tsui E, Rao RC. Navigating social media in #Ophthalmology. Ophthalmology 2019;126:779-82.

29. Clarke C, Smith E, Khan M, Al-Mohtaseb Z. Social media and ophthalmology: Perspectives of patients and ophthalmologists. J Med Syst 2018;42:258.

30. Melendez R, Angadi P, Sleed E, Acosta G, Grieco M, Sherpa M, et al. Academic ophthalmology departments and their use of Facebook, Instagram and Twitter social media pages. Invest Ophthalmol Vis Sci 2018;59:6172.

31. Ventola CL. Social media and health care professionals: Benefits, risks, and best practices. P T 2014;39:491-520.

32. Nathaniel GI, Adio O. How ophthalmologists and ophthalmologists-in-training in Nigeria use the social media. Niger J Med 2016;25:254-8.

33. Young BK, Verter E, Howard MA. Quality analysis of publicly available videos for pediatric strabismus surgery. J AAPOS 2020;24:102-4.

34. Altunel O, Sirakaya E. Evaluation of YouTube videos as sources of information about multifocal intraocular lens. Semin Ophthalmol 2021;36:423-8.

35. Fathy C, Cehelyk E, Israilevich R, Deiner M, Venkateswaran N. Instagram and ophthalmology: Perspectives of patients and ophthalmologists. J Med Syst 2018;42:258.

36. Alasnag M, Mamas M, Fischman D, Brugaletta S, Safirstein J, Meier P, et al. View point on social media use in interventional cardiology. Open Heart 2019;6:e001031.

37. Huang AS, Abdullah AAN, Chen K, Zhu D. Ophthalmology and social media: An in-depth investigation of ophthalmologic content on Instagram. Clin Ophthalmol 2022;16:685-94.