

# Social Media for the Dissemination of Educational Videos About Inflammatory Bowel Diseases

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**INTRODUCTION:** To broadly disseminate 5 user-centered educational videos for patients with inflammatory bowel disease and their family and friends on social media.

**METHODS:** Relevant social media users were iteratively identified based on their online behavior. For each video, 2 different accompanying texts were tested.

**RESULTS:** We reached 4.2 million social media users of whom 320,302 watched at least 50% of the video. A short description resulted in higher view rates than posing an open-ended question.

**DISCUSSION:** We showed the feasibility of large-scale dissemination of health-related educational videos through social media. Our findings can inform future online dissemination approaches of educational content.

**SUPPLEMENTARY MATERIAL** accompanies this paper at <http://links.lww.com/AJG/C530>

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## INTRODUCTION

Patients with inflammatory bowel disease (IBD) have a wide variety of educational needs that are often not addressed at the point of care (1–3). Patients therefore use social media to seek information about their diagnosis and find support from their peers (4–6). However, information on social media can be challenging to navigate because the accuracy varies (6,7). Conversely, little information is available for health care professionals about the best ways to disseminate educational content on social media (7).

Previously, we developed 5 IBD-related educational videos using a user-centered design with the goal to disseminate these through social media (6). The videos discuss on how to be a good self-advocate, stay healthy beyond medicines, cope with an IBD diagnosis, and decide the best treatment option. In addition, we developed a video for family and friends to educate them about the effect of IBD (6). All videos were designed to be short (<2 minutes) for broad social media dissemination (6). After watching these videos, patients' activation levels and family members and friends' levels of understanding increased (8). In this study, we aimed to broadly disseminate these videos on social media using targeted messaging to test which messaging strategies work the best.

## METHODS

The videos were disseminated within the United States between July 16, 2020, and January 15, 2021, on Facebook and

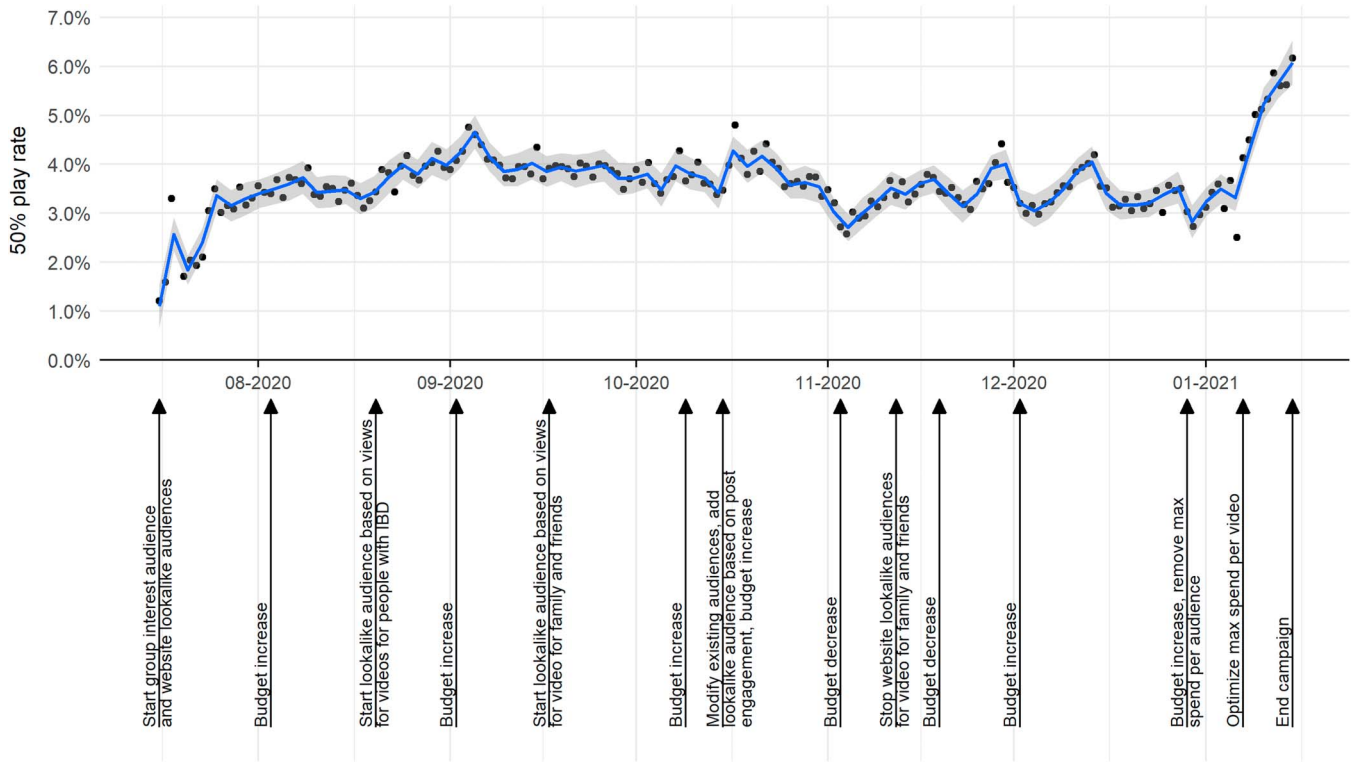
Instagram using the Facebook Ads Manager. For each video, 2 different accompanying texts (copy styles) were developed to test the optimal messaging strategy: posing an engaging question vs providing a short description of the video (see Supplementary Table 1, Supplementary Digital Content 1, <http://links.lww.com/AJG/C530>). We aimed to achieve the highest view rate possible by specifically targeting users likely to benefit from the videos (i.e., people with IBD and their family/friends) and by iteratively adjusting our audiences over time based on the view rates. The 4 videos for patients with IBD with 2 different copy styles each were randomly assigned to each targeted user; the 2 different copy styles for the video for family and friends were also randomly assigned within the respective target population.

We recruited Instagram and Facebook users who liked IBD-related pages and online visitors to our <http://ibdandme.org> website and IBD-related pages on <https://mygi.health>. In addition, we identified users who were similar to the users identified above regarding demographics and online behavior using a process called “lookalike audience” matching. Over time, audiences were iteratively updated by identifying users similar to those who previously watched or interacted with the videos.

The primary outcome was the percentage of targeted users who viewed  $\geq 50\%$  of a video. To assess the effectiveness of various strategies, we compared the view rates between (i) different

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**Figure 1.** The 50% view rate over the course of the campaign. The arrows indicate the optimizations performed over time. Note that the rates represent daily rates; over time users could be targeted multiple times, resulting in an overall 50% view rate of 7.6% by the end of the campaign.

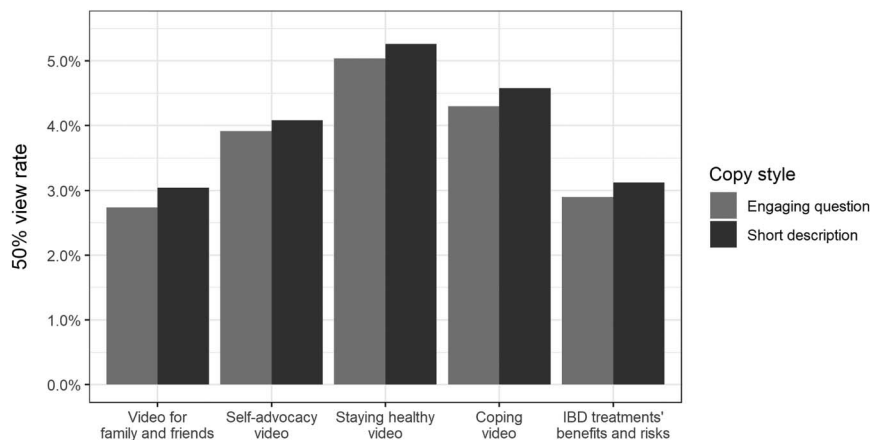
copy styles, (ii) different videos, and (iii) different audiences. In addition, the outcomes were compared between age groups and sexes. The  $\chi^2$  tests were used to compare rates between the groups. The study was approved by the Cedars-Sinai Institutional Review Board under protocol number STUDY00000146.

**RESULTS**

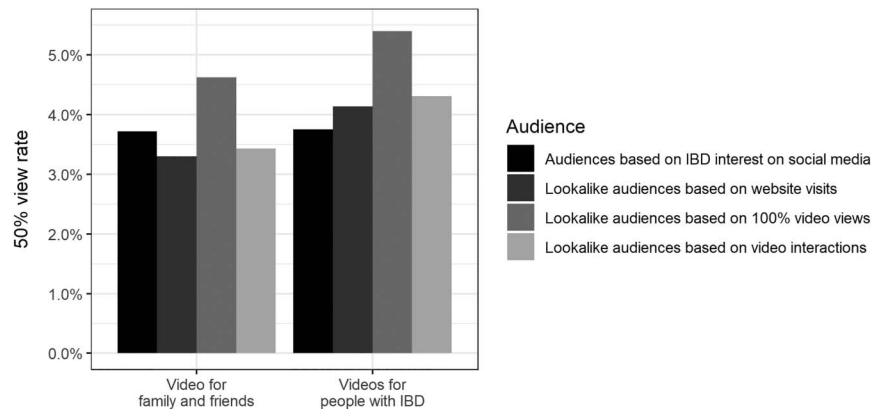
In total, 4.2 million Facebook and Instagram users were targeted to view 1 of the 5 videos; of those, 7.6% (320,302) watched at least 50% of the video, 3.1% (130,328) watched the video until the end,

and 0.87% (36,608) interacted with the video (i.e., a like, comment, share, or click; see Supplementary Table 2, Supplementary Digital Content 1, <http://links.lww.com/AJG/C530>). Over the course of the study, frequent optimizations were performed, including the addition of new lookalike audiences, the deletion of audiences that were exhausted or stopped performing, and budget modifications based on current advertising rates (Figure 1).

For all videos, offering a short informational description resulted in higher view rates than posing an open-ended question (average 50% view rates of 4.0% and 3.7%, respectively;



**Figure 2.** Average daily 50% view rates by video and copy type. IBD, inflammatory bowel disease.



**Figure 3.** Average daily 50% view rates for different audiences. IBD, inflammatory bowel disease.

$P < 0.0001$ ; Figure 2). Significant differences were found in the efficacy of the 5 videos ( $P < 0.0001$ ; Figure 2): The most popular videos were those about staying healthy and coping (average 50% view rates of 5.2% and 4.4%, respectively), whereas the video for family and friends and the video about choosing the medication that's right for you were the least popular (average 50% view rates of 2.9% and 3.0%, respectively). We also identified differences between audiences ( $P < 0.0001$ ; Figure 3): The most effective audience was the lookalike audience that identified users similar to those who previously watched 1 of the videos for patients with IBD until the end. View rates were higher among older users and female individuals, especially within the IBD audience (see Supplementary Figures 1–4, Supplementary Digital Content 1, <http://links.lww.com/AJG/C530>).

## DISCUSSION

We disseminated 5 user-centered educational videos for patients with IBD and their family and friends through social media, and tested various strategies for reaching a large, disease-specific audience. To reach as many users as possible, continuous adjustments were made in our target population using lookalike audiences. The most effective audience was a lookalike audience based on complete video views. In addition, offering a short informational description worked better to engage social media users than posing a short open-ended question. These lessons could increase the reach of a campaign by tens of thousands of viewers.

Overall, female social media users were more engaged than male social media users, which can be explained by the fact that female users are generally more present on social media (9) and are more likely to actively seek educational information (1). Older users were also more engaged. The most effective videos were those about staying healthy and coping. One reason for this could be that the campaign took place during a time in which large parts of the country were in partial or complete lockdown due to the COVID-19 pandemic, which negatively affected the wellbeing and self-efficacy of patients with IBD (10–12).

Limitations of this study include an inability to verify whether social media users were diagnosed with IBD and/or knew somebody with IBD. In addition, the study was conducted during the COVID-19 pandemic, which might limit the generalizability of the results.

In conclusion, we show the feasibility of large-scale dissemination of health-related educational videos through social media.

This dissemination approach and attendant lessons learned may be useful to others who seek to disseminate disease-specific educational content through social media—both in Gastroenterology and in other specialties that manage chronic diseases.

## CONFLICTS OF INTEREST

**Guarantor of the article:** Welmoed K. van Deen, MD, PhD.

**Specific author contributions:** B.M.R.S. and C.V.A. conceived the study. W.K.v.D. developed the analytic approach with input from B.M.R.S. and C.V.A. M.S. collected the data and provided critical expertise in the interpretation of the data. W.K.v.D. and M.S. analyzed the data. M.S., T.D., C.K., and N.N.B. played a critical role in the interpretation of the data. W.K.v.D. drafted the manuscript. All authors reviewed the manuscript for important intellectual content and approved the final version.

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**Potential competing interests:** B.M.R.S. serves on an advisory board for Takeda. The other authors do not have any financial disclosures or conflicts of interest to report.

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