

Background

Pharmaceutical and biopharmaceutical companies have quickly established a presence on social media over the last decade with the majority of companies having a presence on multiple social media platforms. Though based on self-reporting from 14 pharmaceutical and biopharmaceutical companies, only 11% of trials at these companies were using social media to recruit subjects for clinical trials. These instances primarily occurred only in North America, with Facebook, YouTube, and Twitter being the most common mediums.¹

Social media has potential to be an attractive tool for patient recruitment. The FDA has affirmed that direct recruitment for research subjects using media advertising is not an objectionable practice, so long as the content is not coercive and does not imply or promise a benefit beyond what is stated in the protocol and informed consent form, as interpreted by an IRB.² The existing approaches by pharmaceutical and biopharmaceutical companies to recruit trial subjects with social media have varied in their degrees of directness and aggressiveness. This analysis looks to qualitatively characterize specific examples along that spectrum of directness, with the degree of patient engagement, and in context of Good Clinical Practice (GCP) and the US Code of Federal Regulations (CFR).

Objectives

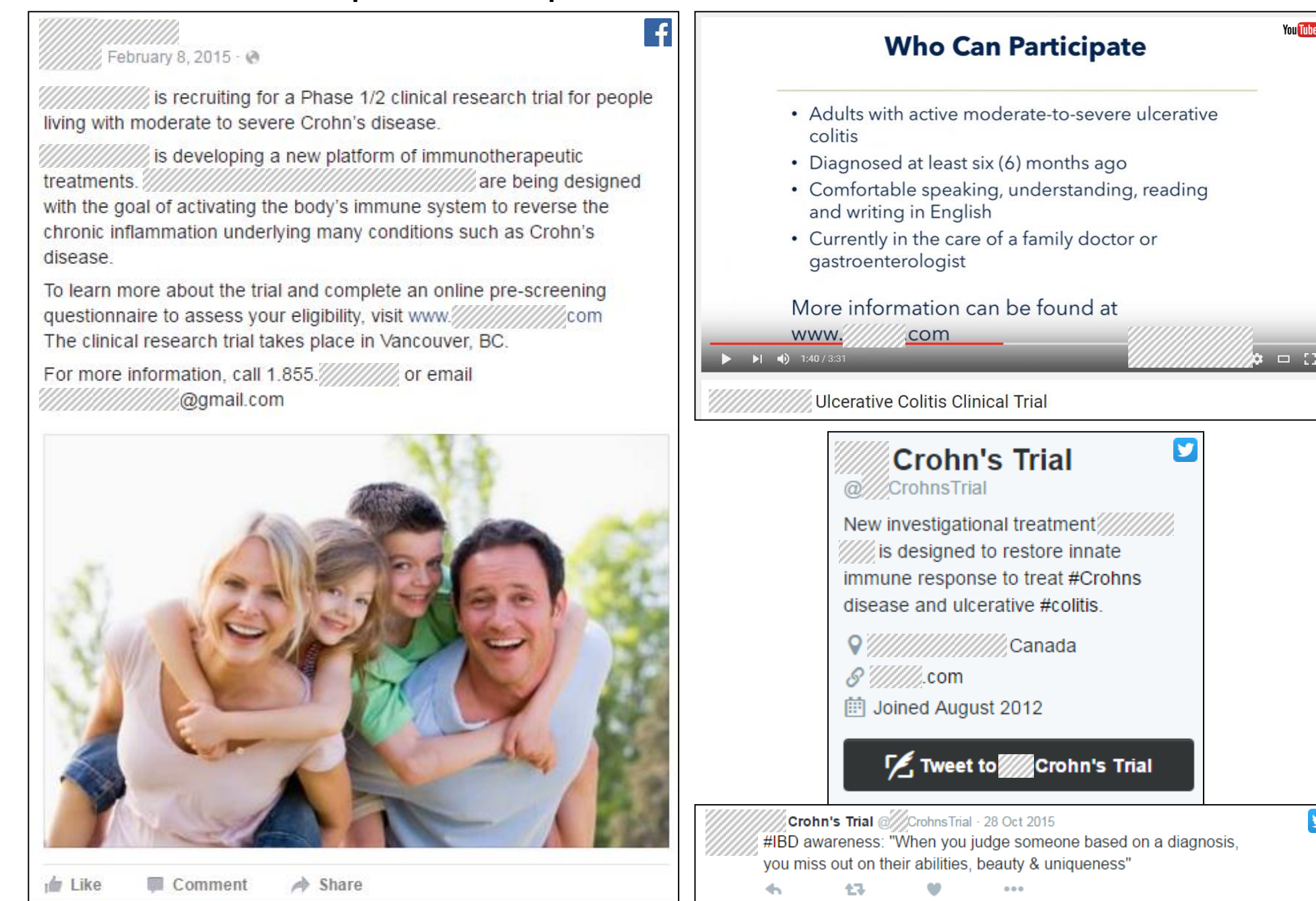
- To analyze and highlight different strategies of clinical trial patient recruitment on social media by pharmaceutical and biopharmaceutical companies.
- To examine each strategy with consideration of uniqueness, opportunities for patient engagement, ethical and regulatory compliance, and aggressiveness.

Methods

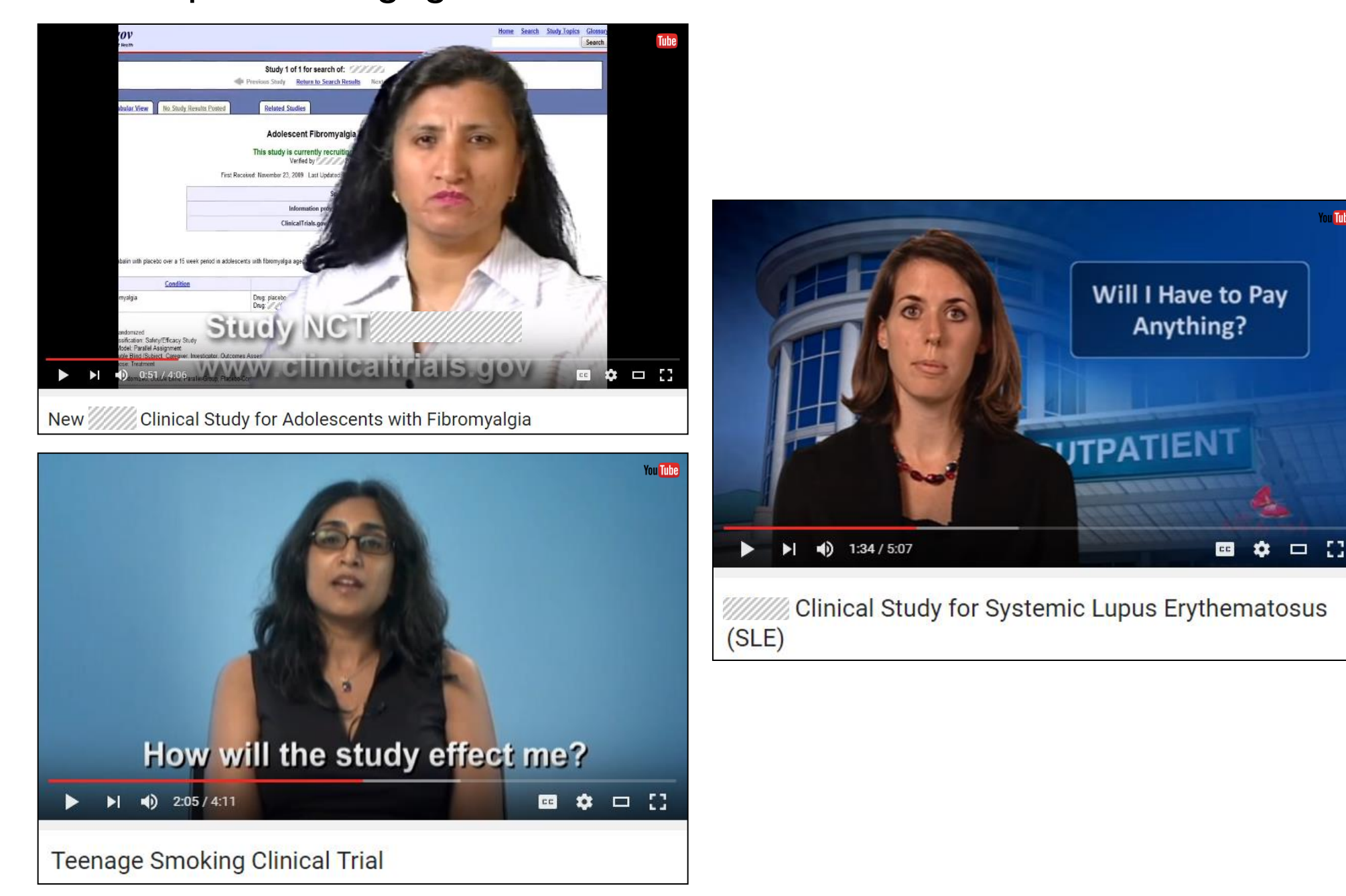
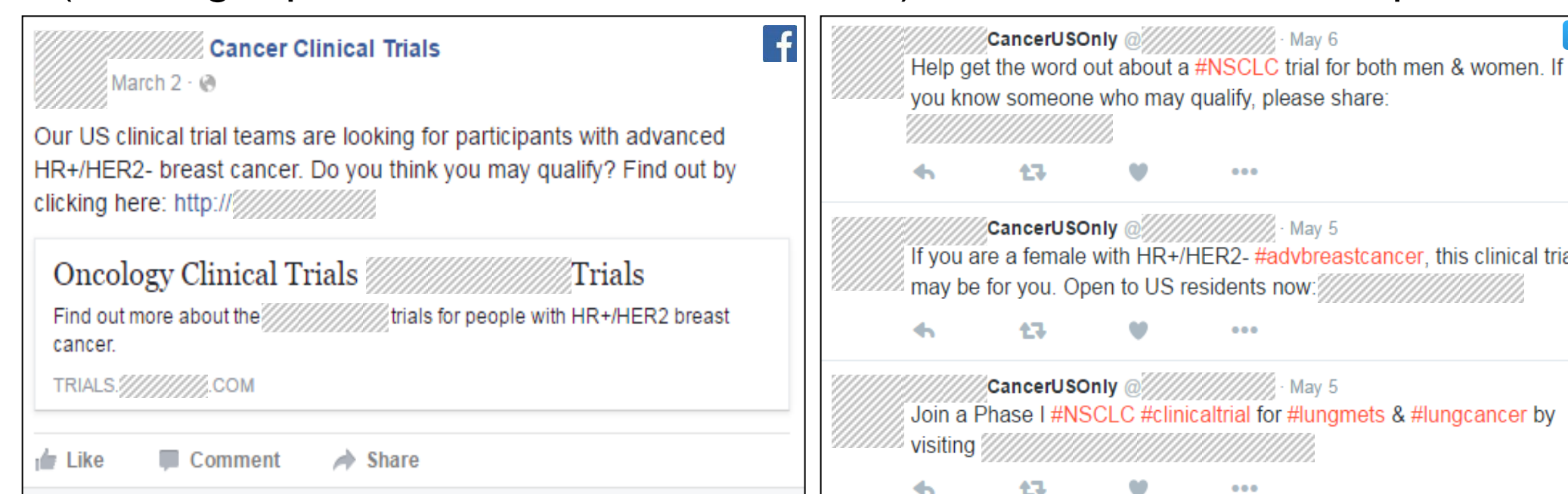
- A retrospective, qualitative analysis was performed of posts on the social media platforms Facebook, Twitter, and YouTube by pharmaceutical companies aimed at recruiting subjects for clinical trials.
 - The scope included posts from social media accounts which self-identified the Sponsor company, usually with the company name in the account's title.
 - Posts by individual trial sites and contract research organizations (CROs) were considered out of scope.
- Keyword searches for relevant terms including "clinical trial," "clinical study," "research study," and "investigational drug" were performed on Facebook, Twitter, and YouTube.
- Unique examples were chosen for the analysis. Descriptions and analyses of each example were prepared assessing breadth of information shared, level of directness, opportunities for patient engagement, and unique tactics. The examples were also put into context of GCP and the CFR.
- Screenshots of posts are blinded to readers to avoid bias when considering these approaches.

Results

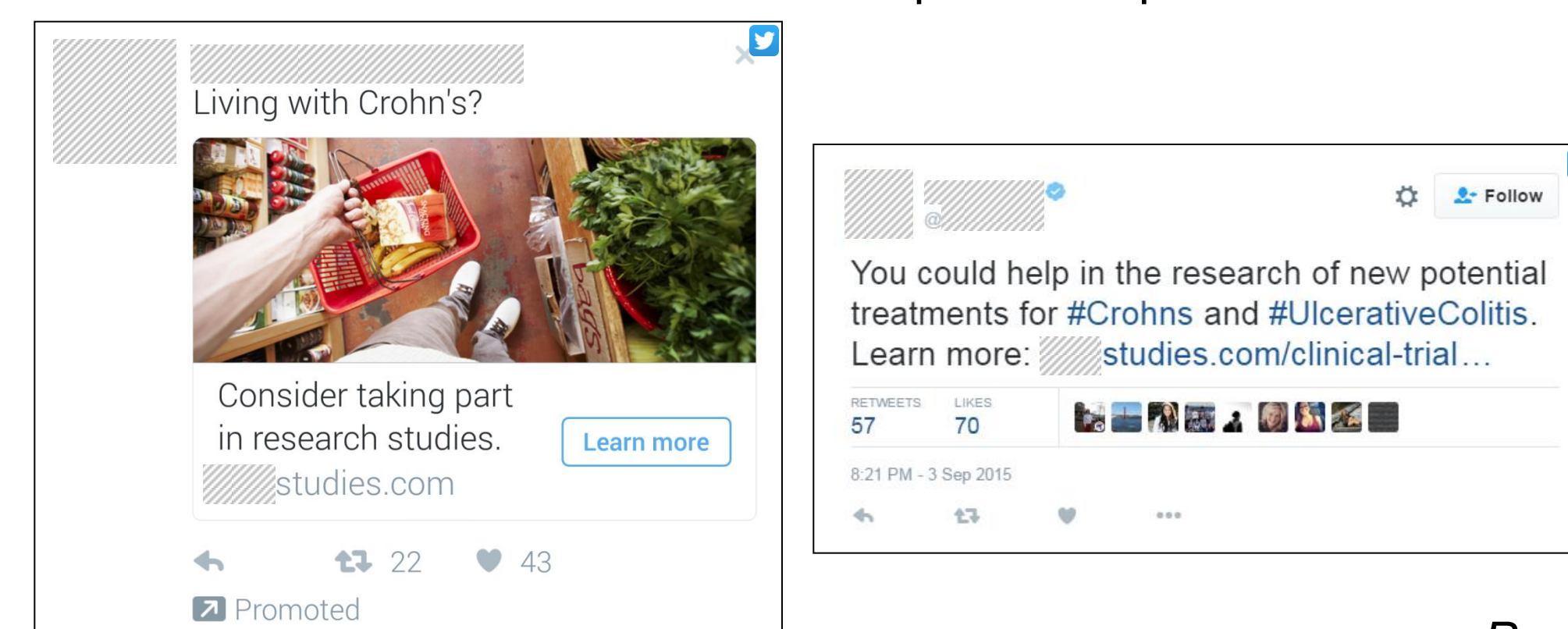
- A small, Canadian-based biopharmaceutical company recruits subjects for irritable bowel disease trials using Facebook, Twitter, and YouTube.
 - YouTube videos provide a list of investigator sites, eligibility criteria, and other information including the ICF process and potential AEs.
 - Facebook posts discuss the investigational treatment and prompt patients to take a pre-screening questionnaire. A contact phone number is shared directly in the text of the posts for interested persons.
 - The Twitter account is titled [Company] Crohn's Trial, yet does not directly recruit for the trial. Rather, the tweets focus on disease awareness and patient inspiration.
- A large, EU-based pharmaceutical company recruits subjects for oncology clinical trials using Facebook and Twitter.
 - Facebook and Twitter posts directly ask viewers if they or family members might qualify for an oncology trial and provide a link to the ClinicalTrials.gov page for the study.
 - Twitter posts are very frequent (2-3 per day) and are intended for US residents only, as noted in the account name and description.
 - The Twitter page has approximately 13,100 Followers and the Facebook has approximately 45,420 "Page Likes" (users following an account). There are opportunities for direct patient engagement for both, with dozens of "Likes" (showing support for a post) and a few "Shares" (sharing a post across a user's network) on several Facebook posts.
- A large, US-based pharmaceutical company recruits children and adults for various clinical trials using YouTube videos.
 - The videos are 4-6 minutes in length and systematically detail the studies as they outline why the study is being performed, who is eligible, what the time requirements are, and what costs will be reimbursed.
 - On multiple occasions, the videos direct the viewer to speak with their physician and refer the viewer and physician to ClinicalTrials.gov for more information. There is minimal chance for patient engagement as the comment sections are disabled.



- A large, EU-based pharmaceutical company recruits subjects for oncology clinical trials using Facebook and Twitter.
 - Facebook and Twitter posts directly ask viewers if they or family members might qualify for an oncology trial and provide a link to the ClinicalTrials.gov page for the study.
 - Twitter posts are very frequent (2-3 per day) and are intended for US residents only, as noted in the account name and description.
 - The Twitter page has approximately 13,100 Followers and the Facebook has approximately 45,420 "Page Likes" (users following an account). There are opportunities for direct patient engagement for both, with dozens of "Likes" (showing support for a post) and a few "Shares" (sharing a post across a user's network) on several Facebook posts.



- A large, US-based biopharmaceutical company uses promoted (paid) tweets to recruit subjects for ulcerative colitis and Crohn's disease trials.
 - Paid tweets are deployed from the company's general Twitter account. It is unclear if they are targeted at certain users or demographics.
 - From user replies to the tweets, the majority of online engagements to date have been negative or facetious in nature.
 - The Twitter account does not otherwise tweet about clinical trials recruitment aside from the promoted posts.



Discussion

Each included case is within the realm of GCP and the CFR and are not unduly coercive or promising of a cure or unreasonable benefit.² Some posts were more direct and aggressive than others though. *Company 1's* approach included a multi-platform campaign on three social sites and was very direct, prompting patients to take an online eligibility questionnaire or call a telephone hotline to learn more about the trial, and detailing important aspects of a trial with YouTube videos. *Company 3* also created thorough YouTube videos, providing a fair amount of information about key inclusion criteria, necessary procedures, time commitment, reimbursements, and how to enroll. To some degree the video mimicked portions of an informed consent discussion.

Company 2 called upon emotion and a sense of obligation, using frequent posts to ask readers to share certain trials with "a loved one" and calling on readers to "help fill openings" and "help spread awareness." The Facebook and Twitter platforms made it very easy to share the posts with a family member.

Company 4 utilized the promoted (paid) feature on Twitter in an attempt to gain more exposure. While each of the aforementioned social media sites have policies restricting the use of ad targeting with personal health information obtained from past browsing, practices by less established websites could potentially be less ethical. Twitter restricts all clinical trial promoted tweets without pre-authorization, which *Company 4* may have needed to obtain.³

Conclusions

- A minority of pharmaceutical and biopharmaceutical companies have used company identified accounts on the social media platforms of Facebook, Twitter, and YouTube to recruit subjects for clinical trials. While the effectiveness of these approaches was not evaluated here, the strategies employed have been unique.
- The wide variety of available social platforms allow companies to tailor their recruitment messages in different formats, lengths, and interactivity. An approach across multiple platforms has opportunities for synergy and patient engagement.
- As more people are creating accounts on social media globally and as clinical trial enrollment is becoming increasingly competitive in many disease states, it will be important for companies to consider social media for trial recruitment as a targeted strategy to obtain subjects and potentially expedite enrollment timelines.

References

- Tufts Center for the Study of Drug Development. *Industry Usage of Social and Digital Media Communities in Clinical Research* [White Paper]. Jun2014. http://csdd.tufts.edu/files/uploads/TCSD_Social_Media_Final.pdf
- FDA. *Recruiting Study Subjects Information Sheet*. 25Jan2016. <http://www.fda.gov/RegulatoryInformation/Guidances/ucm126428.htm>
- Twitter. *Health and Pharmaceutical Products and Services*. Accessed 23May2016 at <https://support.twitter.com/articles/20170441>

Joe Fiore, PharmD
 Clinical Sciences & Study Management
 Merck & Co., Inc.
 joseph.fiore1@merck.com



Disclosures
 Joe Fiore and Kelly White are employees of Merck & Co., Inc.