

BAD NEWS TRAVELS FURTHEST: THE SOCIAL MEDIA IMPACT OF PUBLICATIONS AROUND TRIAL DISCLOSURE AND MEDICAL WRITING

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ABSTRACT

Objective: Issues around disclosure of clinical trial results and provision of medical writing support have gained significant traction in the social and conventional media, as well as among industry professionals and academics. We sought to understand the social media response to articles concerning these topics.

Research Design and Methods: We assessed the social media reach of 7 representative peer-reviewed commentaries published 2012–2014 with positive and negative perspectives. We also undertook a temporal and sentiment analysis of tweets containing the #alltrials hashtag.

Results: An analysis of “non-publication” of randomized trials achieved the greatest impact, with an Altmetric score of 600. In comparison, an analysis of trial publications emphasizing high publication rates for industry trials achieved a score of 46. Other negative perspectives scored 287 (a commentary criticizing trial non-publication) and 99 (calling for authors of ghostwritten articles to be prosecuted). Three articles with more positive perspectives scored 48 (addressing inaccessible research), 27 (recommendations to close the credibility gap in reporting industry-sponsored clinical research) and 14 (a call to “Promote Ethical Authorship and Other Good Publication Practices”). However, tweets featuring the #alltrials hashtag were primarily driven by non-publication events.

Conclusions: The social media impact of this small sample of articles on trial disclosure and medical writing is substantially lower for articles carrying a positive message. However, the direct impact of these publication events on social media interactions is small compared with non-publication events.

SUMMARY AND CONCLUSIONS

- This small sample shows greater online reach of publications with a negative perspective to trial disclosure and medical writing support.
- Partly this relates to the high profile of the journals in which these articles were published.
- It is also connected with the viral communication among non-scientists, reflecting public concern over these issues.
- However, tweets related to the AllTrials campaign were largely driven by non-publication events, suggesting that the influence of peer-reviewed publication on the debate is relatively small.

INTRODUCTION

- Issues around disclosure of clinical trial results and provision of medical writing support have gained significant traction in the social and conventional media, as well as among industry professionals and academics.
- Use of social media, including blogs and social networking sites, as a form of communication, has grown exponentially in recent years and has become deeply embedded in modern society.

OBJECTIVE

- We assessed the social media reach of representative peer-reviewed commentaries with positive and negative perspectives on issues around disclosure of clinical trial results and provision of medical writing support published between 2012 and 2014.

METHODS

- We chose 7 recent publications that discussed transparency in clinical trials and/or the role of medical writers. Three of these were generally critical or gave a negative opinion of transparency efforts,^{a,b,c} while 4 took a more positive line.^{d,e,f,g}

a. Jones CW, et al. Non-publication of large randomized clinical trials: cross sectional analysis. *BMJ*. 2013;347:f6104.
 b. Doshi P, et al. Restoring invisible and abandoned trials: a call for people to publish the findings. *BMJ*. 2013;346:f2865.
 c. Bosch X, et al. Challenging medical ghostwriting in US courts. *PLoS Med*. 2012; 9(11):e1001163.
 d. Rawal B, Deane BR. Clinical trial transparency: an assessment of the disclosure of results of company-sponsored trials associated with new medicines approved recently in Europe. *Curr Med Res Opin*. 2013;1-11.
 e. Chan A-W et al. Increasing value and reducing waste: addressing inaccessible research. *Lancet*. 2014;383:257-266.
 f. Mansi BA, et al. Ten recommendations for closing the credibility gap in reporting industry-sponsored clinical research: a joint journal and pharmaceutical industry perspective. *Mayo Clin Proc*. 2012;87(5):424-429.
 g. Woolley KL, et al. Time to finger point or fix? An invitation to join ongoing efforts to promote ethical authorship and other good publication practices. *Ann Pharmacother*. 2013;47:1084-1087.

- Two publications provided primary data on trial disclosure – Jones et al (2013)^a and Rawal et al (2013).^d The others were commentary and/or calls to action.
- Overall online media impact was assessed using the Altmetric score, and numbers of citations in different sources (news, blogs and social media) were obtained from Altmetric.com.¹ [Accessed on 18 February, 2014.]
- The Altmetric score is a quantitative measure of the attention that a scholarly article has received. It is derived from 3 main factors:
 - Volume (score increases as more people mention the article)
 - Sources (each category of mention contributes a different base amount to the final score)
 - Authors (how often the author at each mention talks about scholarly articles, and whether or not there is any bias towards a particular journal or publisher or who the audience is)
- We also undertook a temporal and sentiment analysis of tweets containing the “#alltrials hashtag” (the hashtag of the AllTrials campaign).²

Papers critical of the industry attract the most attention on social media

- 1 Why was this research needed?**
Disclosure of clinical trial results and provision of medical writing support are current hot topics – but how is this reflected in the social media impact of publications?
- 2 What did we learn from this investigation?**
Publications with a negative perspective, highlighting under-reporting of trials or criticizing medical writing support, had greater social media impact than publications with positive perspectives.
- 3 What are the recommendations for the future?**
The medical publications community should engage in active communication of different perspectives on trial disclosure, to ensure that alternative viewpoints are heard.

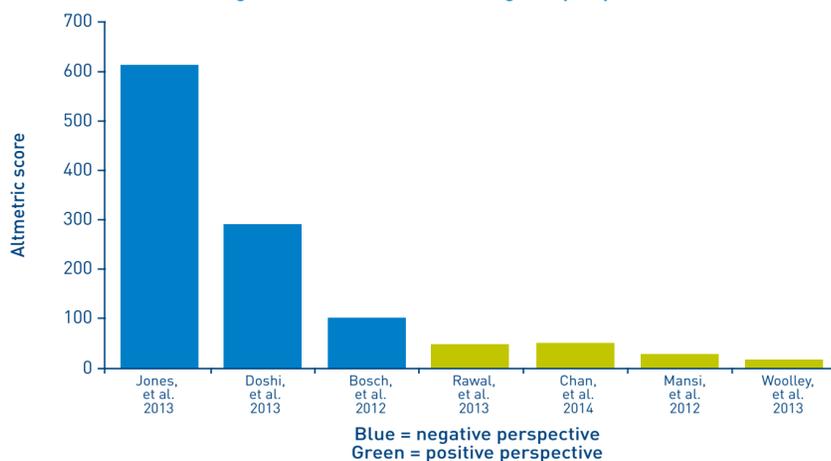


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RESULTS

- Of the 2 primary papers, Jones, et al (2013)^a featured in 24 news stories and science blogs, and was heavily tweeted. Rawal, et al (2013)^d was featured in only 2 news stories (one of which was an incidental mention only) and received few tweets.
- Publications with a negative perspective were somewhat more likely to be tweeted by members of the public, in particular the primary study (Jones, et al^a) and the perspective calling for legal action against “ghostwriters” (Doshi, et al).^b

The altmetric score was highest for the articles with a negative perspective.

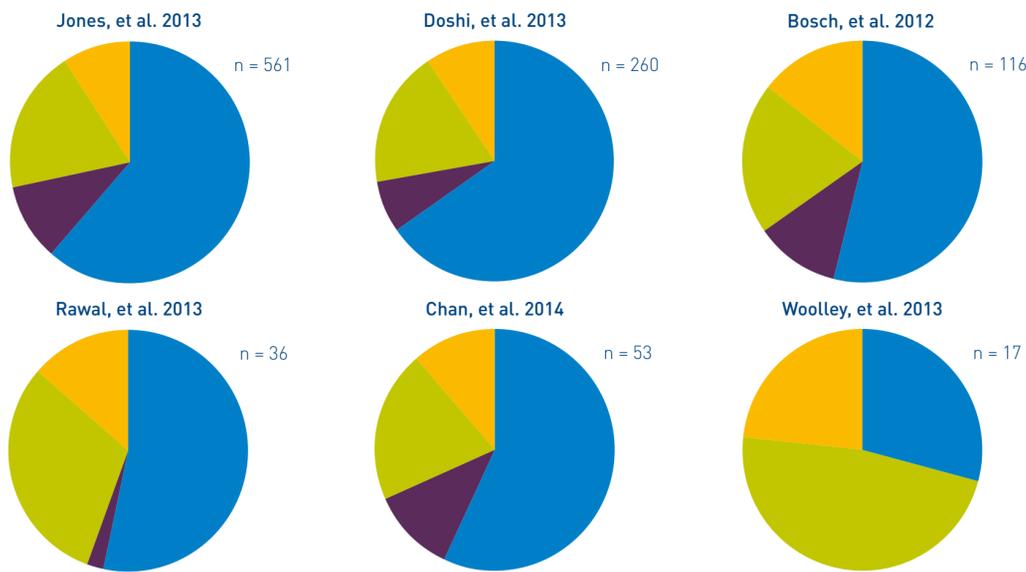


Most social media mentions came from Twitter.

Article	Article perspective	News	Science blogs	Twitter	Facebook	Google+	Reddit
Jones, et al. 2013	Negative	14	10	561	31	4	2
Doshi, et al. 2013	Negative	5	9	260	18	2	
Bosch, et al. 2012	Negative		2	116	5	2	
Rawal, et al. 2013	Positive	2		36			
Chan, et al. 2014	Positive		1	53			
Mansi, et al. 2012	Positive	2	1	1			
Woolley, et al. 2013	Positive			17			

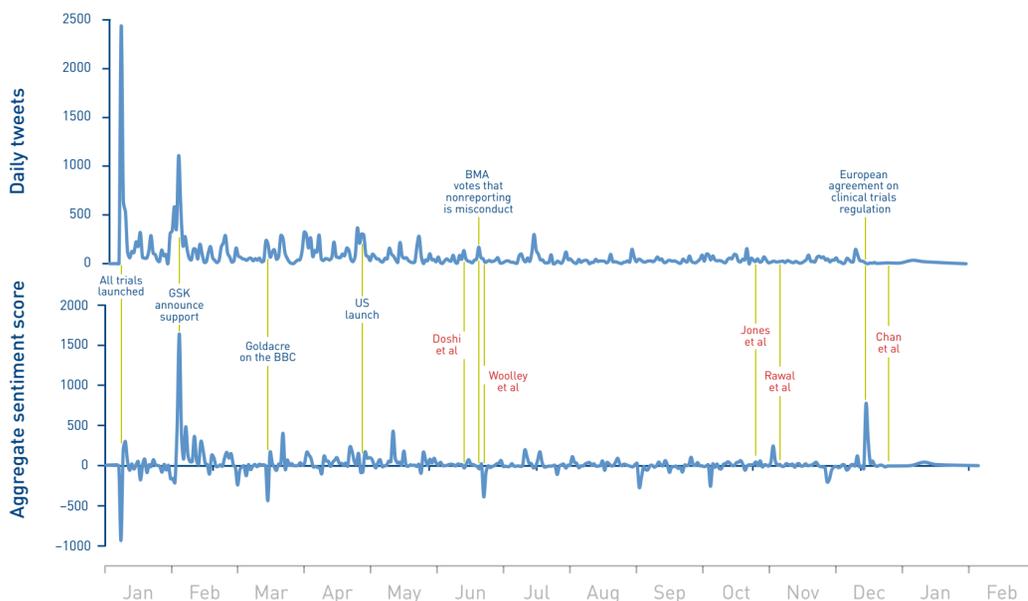
Most tweets were from members of the public.

- Members of the public
- Healthcare practitioners
- Scientists
- Science communicator



Insufficient tweets to analyse Mansi et al!

Tweets featuring the #alltrials hashtag were primarily driven by non-publication events.



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1. Altmetric <http://www.altmetric.com/>. Accessed on 18 February, 2014.
2. AllTrials <http://www.alltrials.net/all-trials/>. Accessed on 18 February, 2014.



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