

Publication reach metrics via social media listening in China

Laura LeGower^a, Chris Langford^a, Isaac Ma^b, Molly Yu^b, Yuxin Zhao^c, and Yan Ma^c

^aMedical Communications, Parexel, Hackensack, NJ, USA;

^bMedical Communications, Parexel, Pudong, Shanghai, China;

^cTech and statistics, Zest Bridge, Daxing, Beijing, China



<http://bit.ly/41kTkj0>

Scan the QR code to continue the interactive journey, access expanded data, and join the conversation

INTRODUCTION

- Alternative metrics (ie, altmetrics) are complementary to traditional, citation-based metrics as they provide rapid information on how often a journal article is discussed in social media and utilized or 'captured' (eg, in browser favorites and reference manager downloads)
- China published more scientific publications than the United States in 2020 and the volume of biomedical articles is increasing.^{1,2} However, current altmetric tools may not provide a full account of social media activity in China
- Existing altmetric tools (eg, Altmetrics®, PlumX) use data from global social media platforms such as Twitter, Facebook, or Mendeley. However, China has platforms that are different to global platforms in their technological functionalities, user groups, and languages, which pose challenges for assessing social media listening in China— there may be cultural differences in commenting and sharing behavior, and governmental policies that restrict which companies can perform social media analyses

METHODS

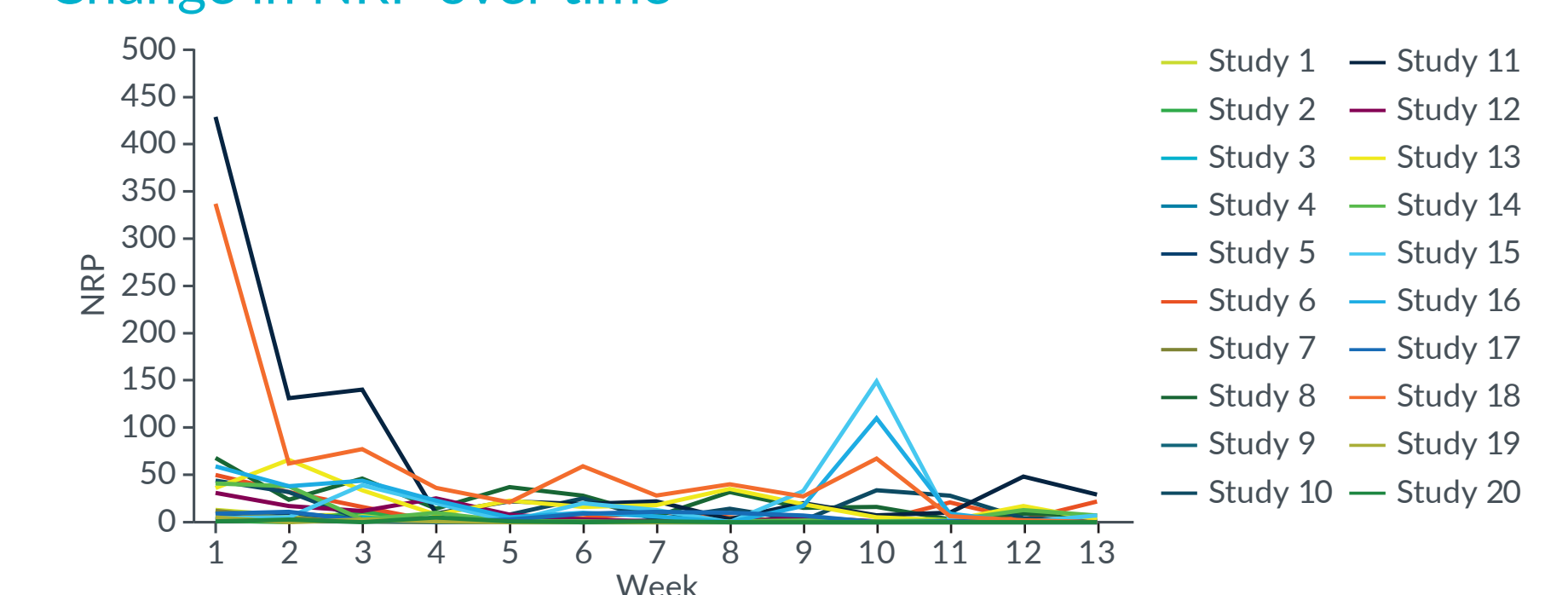
- We calculated two metrics that reflect reach and publication activities on social media platforms. Based on these, we developed a composite social media attention score (SoMAS):
 - NRPs:** cumulative number of posts related to a publication on social media platforms
 - Engagements:** total number of times of users' interactions
 - SoMAS:** cumulative number of posts receiving more than 10 interactions
- Social media data were collected from 60 commonly used platforms in China
- NRP, engagements, and SoMAS were determined for publications on PD-1/PD-L1 inhibitors launched in China before 2022
- Descriptive statistics are presented

RESULTS

NRP

- The median (range) of total NRP (ie, over 13 weeks) for the 20 publications included in this study was 85.5 (range: 9–889), and tended to be higher in the first few weeks after publication and then decline

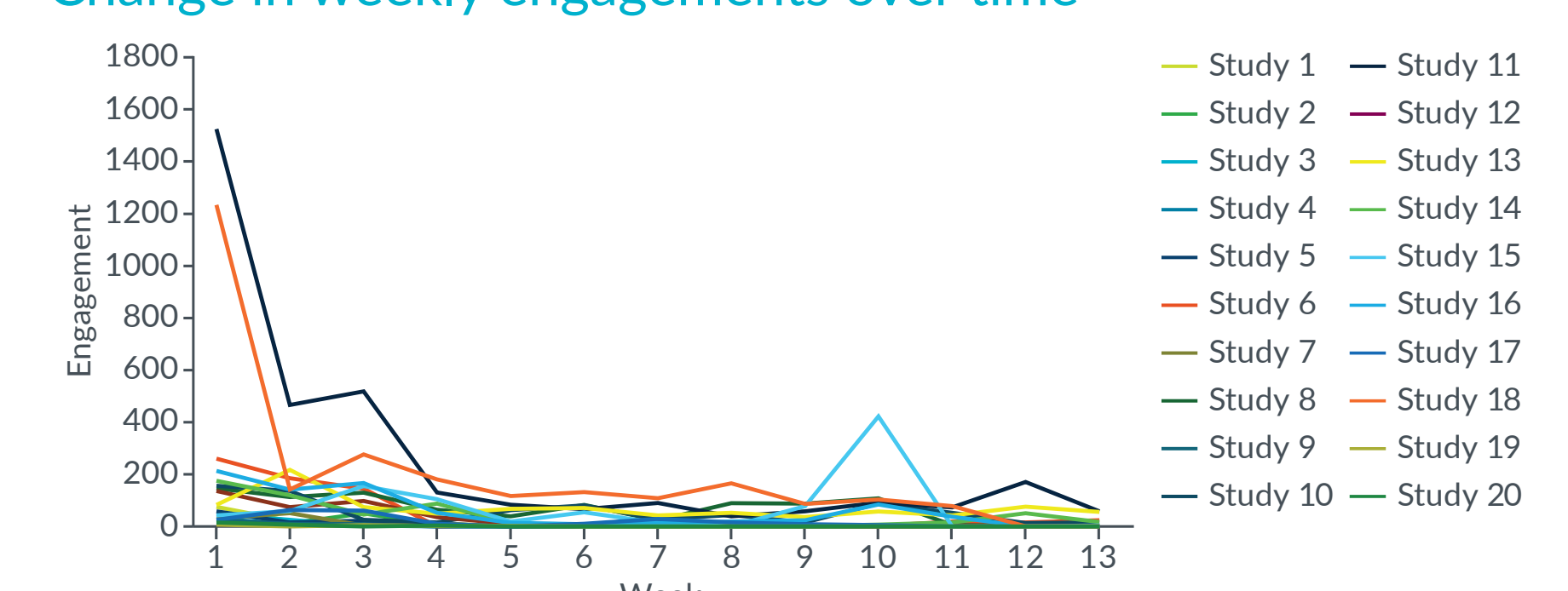
Change in NRP over time



Engagements

- The median (range) of total engagement was 306.5 (16–3361)
- In the first 4 weeks, these contributed to 68.8% of the total engagements (over 13 weeks' analysis), which then declined over time

Change in weekly engagements over time



SoMAS

- The median SoMAS was 0.435 and ranged from 0.02 to 4.27
- There was a positive trend between the number of Google Scholar citations and time since publication, but there was no obvious association with how long a manuscript has been published and SoMAS appeared to be more stable than weekly NRP/engagement.
- NRP, engagements, and SoMAS were all higher for publications in journals with an impact factor ≥ 50 than those with an impact factor < 50

KEY FINDINGS

- The number of relevant posts (NRP) and engagements, which reflect different aspects of attention and social media activities around publications, were calculated based on data from social media platforms in China. A social media attention score (SoMAS) was developed, which integrated these data
- The volume of NRP and engagements tended to be high for a short period after publication before declining
- SoMAS showed poor concordance with the number of citations, regardless of the length of time since an article had been published

SUMMARY/CONCLUSIONS

- Publication reach can be assessed via social media listening in China where social media platforms and vocabulary are different to those in the rest of the world
- SoMAS and NRP may be promising indicators of the initial attention a publication receives. These social media-based metrics can be viewed as complementing citations, which show longer-term impact of publications
- As we continue to evaluate these bespoke metrics, additional social media information will be investigated that will supplement these data

References

- Caroline S, et al. A discussion of measuring the top-1% most-highly cited publications: quality and impact of Chinese papers. *Scientometrics*. 2022;127:1825–1839.
- Digest of Japanese Science and Technology Indicators* 2022. Available at: <https://www.nistep.go.jp/en/?p=5315>. Last accessed March 2023.

Disclosures

Laura LeGower, Chris Langford, Isaac Ma, and Molly Yu are employees of Parexel International. Yuxin Zhao and Yan Ma are employees of Zest Bridge, Beijing, China.

Acknowledgments

This study was supported by Parexel International and Zest Bridge, China. The authors would like to thank Parexel editorial and digital teams for their editorial support and creative design in development of this poster. The poster was built using Scign ePoster technology. ©2023 Parexel International Corporation. All rights reserved. Logos are the property of their respective owners. Poster presented at the 19th Annual Meeting of ISMP, Washington, DC, April 23–26, 2023.