

Linking Scientific Communication Planning to the Evidence Planning Cycle

Using machine learning to predict engagement with medical publications

What is the challenge?

As new data and evidence emerge, their effective communication becomes paramount to influencing medical practice. However, a significant challenge persists: the lag between research breakthroughs and their practical implementation. Astonishingly, it can take **17 to 20 years** for clinical innovations to transition into routine clinical practice.¹

Why does this gap persist? While logistical, financial, and operational hurdles certainly play a role, a common culprit is the **lack of awareness**. Despite ground-breaking research and development efforts, healthcare professionals often remain unaware of the latest findings. What if we could bridge this gap? What if we strategically aligned our communication strategies with evidence generation plans? And what if we could use machine learning models to predict and shed light on the drivers behind the impact of our data and allow us to make informed decisions?

What is our solution?

We have created a novel metric, an **Impact Score**, which quantifies the level of publication engagement in the social and traditional scientific media domains.

The **Impact Score** considers an array of factors including the evidence strategy employed, the profile of the authors, publication journal information, and the level of social media engagement [Figure 1].

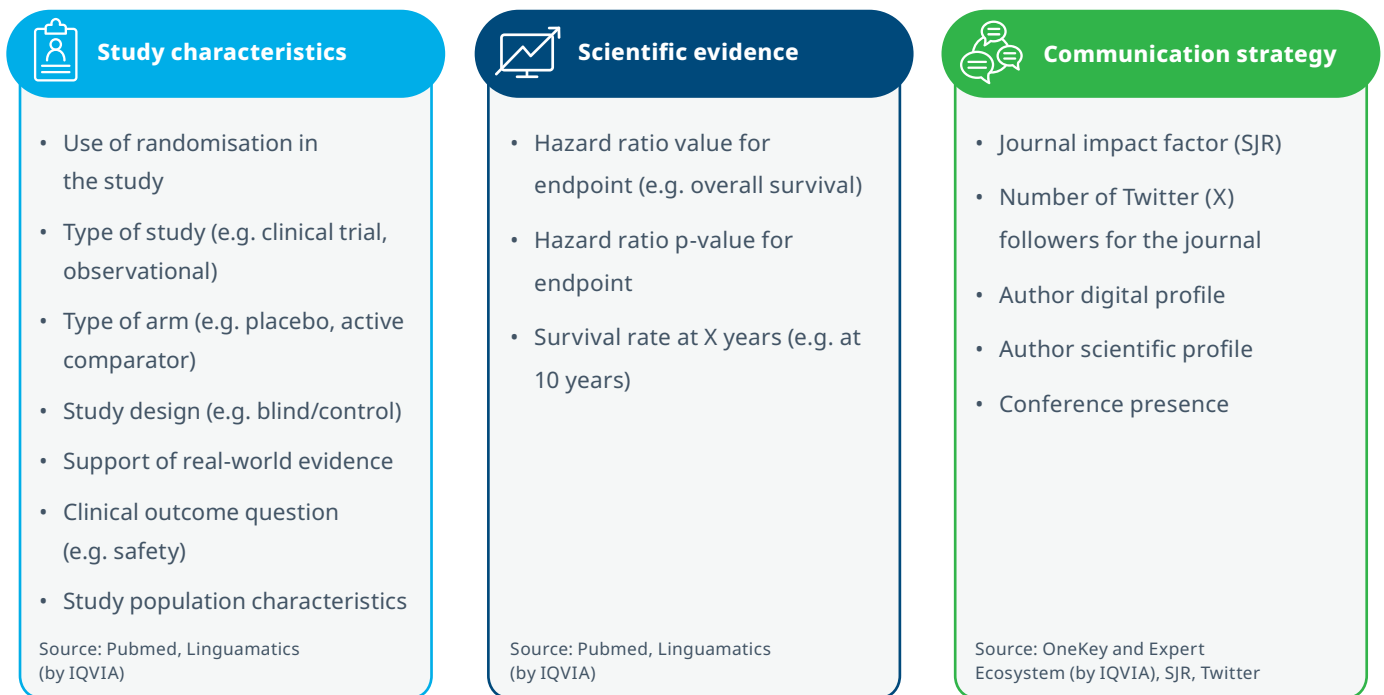
The newly developed metric uses state-of-the-art algorithms to predict publication impact and identify key factors driving engagement. Drawing from a rich set of over 7,500 data points that leverage IQVIA



proprietary data sets and technologies, including Large Language Models, natural language processing from IQVIA NLP, and data from OneKey and Expert Ecosystem, the machine learning backed metric accounts for interactions between features, identifying trends not seen by the human eye.

Leveraging IQVIA's unparalleled data and stakeholder insights, IQVIA's team of publication strategy experts can work with you to enhance your evidence strategy, guide your selection of authors and journals, and inform your scientific communication decisions to ensure that your research has the maximum impact.

Figure 1. List of features used to build the model



Predicting impact in traditional scientific media

Medical evidence is traditionally communicated in scientific journals, the impact of which is traditionally scored by counting the number of citations a paper receives. This, however, doesn't take into consideration where the paper is cited, and therefore the reach, or 'impact' of the paper.

IQVIA's score aggregates SJR and citation information to give a richer view on impact and can be used to quantify and aggregate the impact of the publication on the scientific community.

Used in conjunction, IQVIA's Impact Score enables us to help you predict engagement and identify key factors to optimise your communication strategy across media channels, to drive interactions around your data and optimise engagement with medical evidence across the ecosystem.

To learn more about how IQVIA can help you predict engagement with your publications and help you accelerate the impact of your product data, contact IQVIAMedicalCommunications@iqvia.com.

References

1. Bauer MS, Kirchner J. Implementation science: What is it and why should I care? *Psychiatry Res.* 2020 Jan;283:112376.
2. Fang Z, et al. 2020. An extensive analysis of the presence of altmetric data for Web of Science publications across subject fields and research topics. *Scientometrics.* 2020;124(3):2519–49.

Predicting impact in social media

Social media channels like Twitter (now X) are instrumental for Medical Affairs teams to communicate scientific research findings.²

The effective use of social media as part of scientific communication strategy is challenging due to the complex, fast-paced, and dynamic nature of user engagement on these platforms. This is further compounded by the need to communicate to diverse audiences and navigate complex regulations.

IQVIA's Impact Score can be used to quantify and aggregate the engagement of a scientific study on social media.