

Open Communication as an Integral Part of Open Science

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The concept of Open Science is that scientific discovery must be open to the scientific community and society as a whole, in the sense that anybody who so wishes, can interrogate how the scientific data were collected and analysed, and how the results of the analyses were presented and contextualised. In academic circles, this overarching aim has been translated into the four pillars of open science: 1. open data, 2. open code, 3. open access (i.e. open papers) and 4. open evaluation (i.e. open peer review) (1). However, the focus of most Open Science initiatives has been on making data, code and scientific papers freely available. Comparatively less attention has gone to ensuring that these scientific products are also comprehensible and digestible for experts and non-experts alike.

Open communication, the practice of communicating science via freely accessible media to a diverse audience, has always been at the heart of the SACEMA Quarterly. Ever since the first issue of the magazine, in March 2009, the aim of the Quarterly has been to provide regular updates, articles, and reviews of developments in the world of quantitative epidemiology – with particular reference to challenges and solutions relevant for South Africa. The intention of the magazine was always to present work that is typically highly technical in nature, in a way that makes it accessible to interested health professionals and policy-makers.

Still, over the years, we realised that many other interest groups not part of in this initial target audience also had a strong desire to access and understand epidemiological modelling and analysis work. These include not-for-profit organisations, funders and programme implementers in the health space, as well as funders and programme implementers in the area of science, technology and innovation. In addition, there is a growing recognition that for science is to serve society optimally, more and better quality communication is needed between scientists and the general public.

After careful consideration of the evolving Science Communication landscape in South Africa and globally, we concluded that maintaining our own online magazine was no longer the most efficient way of reaching a large, general audience. Instead, we have decided to partner with The Conversation to bring articles from SACEMA researchers to a wider audience, both within South Africa and

abroad. We believe this change will allow us to spend more time and effort on writing high-quality articles for a general audience, while sparing us the time and effort that goes into soliciting and reviewing articles.

Leveraging the role of open communication in science is not only about publishing science communication articles efficiently, however. It is also about integrating continuous input and feedback from the communities in which the research takes place, and who are affected by its findings. Open communication means making a concerted effort to listen to the questions that the community has, and allowing the design of models and analyses to be guided and informed by voices from the relevant communities. It involves finding out which channels and modes of communication (e.g. social media, drama, mass events, newspaper articles, cartoons or slots on radio talk shows) are most suitable for the audience and the purpose of the communication. Importantly, open communication is not effortless nor free. It requires dedicated training, and there is a zero-sum game between time invested in open communication and time invested in the actual research and the production of peer-reviewed, scientific journal articles. Therefore, funders and academic institutions should provide appropriate budget lines to match the explicit expectations from researchers to become good open communicators and dedicate a fraction of their time to open communication. Furthermore, the process of evaluating and rating scientists should include measurable, relevant benchmarks of their efforts and successes in open science communication and knowledge transfer to society.

While saddened at the realisation that this issue will be the SACEMA Quarterly's last, we are thankful for your interest in our work through the years, and trust that we will count you among the readership of future SACEMA-led articles in The Conversation.

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Reference: 1. Masuzzo P, Martens L. 2017. Do you speak open science? Resources and tips to learn the language. PeerJ Preprints 5:e2689v1. View article <https://doi.org/10.7287/peerj.preprints.2689v1>