

Publication Ethics During Public Health Emergencies Such as the COVID-19 Pandemic



See also Morabia, p. 923, Tarantola et al., p. 925, and the *AJPH* COVID-19 section, pp. 939–977.

Public health emergencies require real-time, accurate information to guide effective responses. Rapid publication of information can, therefore, advance both the scientific validity and the social value of research conducted in these contexts. Consequently, medical journals place a high priority on rapidly publishing reports on these emergencies, which the media often report on to the public. Today, the focus is on the rapid publication of research related to the COVID-19 outbreak. Tomorrow, it might be an influenza pandemic or a crisis related to a vaping-related illness.

Although this rapid sharing of information is necessary and laudable, it entails certain risks. There is the risk, for instance, of inaccuracies and public perceptions that they engender even when corrected. These inaccuracies can be exacerbated because of incomplete information, the difficulty of conducting studies that meet normal standards during an emergency, and the zeal for recognition and prestige that comes with being first and pre-eminent. These risks and how they should be balanced with the potential benefits of rapid publication must adhere to the principles of publication ethics—principles that promote the

integrity, accuracy, and value of scholarly publication.¹

Information about COVID-19 was first posted on the Chinese social media app WeChat by Li Wenliang, MMed, on December 30, 2019, and then officially disclosed on December 31 by Chinese health authorities.² Publications in the biomedical literature soon followed. Journals have now dedicated substantial resources to disseminating this information and compete with one another for prominence.

INACCURACIES PUBLISHED DURING THE OUTBREAK

In the rush to disseminate information about COVID-19, inaccuracies have been published. For example, in their letter to the editor published in the *New England Journal of Medicine* on January 30, 2020, researchers reported that the asymptomatic transmission of COVID-19 is possible.³ The letter described a single case of infection in which transmission appeared to have occurred during the incubation period in the index patient. This finding was of great concern to the public health community and

the public at large. Consequently, this finding was widely reported, appearing in many mass media outlets. Although the conclusion about asymptomatic transmission appears to be correct,⁴ this particular report was based on faulty and incomplete information. The researchers in fact never spoke with the index patient herself. When German health officials did, the patient reported being symptomatic when transmission occurred.⁵

One consequence of the publication of this letter is that the status of asymptomatic transmission may remain muddied to the public—popular media headlines have reported that this is possible, but later headlines have called this into question. These claims have no doubt made their rounds through social media and likely now serve as the basis for many people's attitudes and behaviors toward this virus, in addition to their perception about the effectiveness of measures taken to

curb its spread and their willingness to adhere to and enforce them.

As another example, the editors of the *Journal of the American Medical Association* recently became aware that some of the COVID-19 patients described in recent publications have been reported in more than one submission.⁶ As the editors note, this may create an inaccurate scientific record and affect the accuracy of subsequent estimates of prevalence of the disease or outcomes. Among other outcomes, this could result in inappropriate changes in clinical care, ineffective public health responses, and increasing anxiety about the pandemic.

These episodes are stark lessons in publication ethics during public health emergencies. But there are other consequences relevant to publication ethics. For instance, publications can exacerbate stigma and discrimination toward particular populations. This occurred during the early years of HIV with homosexuals and Haitians. In the current COVID-19 outbreak, there appears to be stigmatization against Chinese populations quite distant from Wuhan. Similarly, episodes like these might confuse policy deliberations and influence public support regarding what

ABOUT THE AUTHORS

Maxwell J. Smith is with the School of Health Studies, Western University, London, ON. Ross E.G. Upshur is with the Dalla Lana School of Public Health, University of Toronto, Toronto, ON. Ezekiel J. Emanuel is with the Department of Medical Ethics and Health Policy, University of Pennsylvania, Philadelphia.

Correspondence should be sent to Maxwell J. Smith, Assistant Professor, Western University, School of Health Studies, 1151 Richmond Street, London, ON N6A 5B9 Canada (e-mail: maxwell.smith@uwo.ca). Reprints can be ordered at <http://www.ajph.org> by clicking the "Reprints" link.

This editorial was accepted March 21, 2020.
doi: 10.2105/AJPH.2020.305686

may in actuality be unnecessary or ineffective public health countermeasures. Finally, faulty publications might confuse the public and lead to adverse reactions. This has been well documented in the case of the faulty report on vaccines causing autism and others linking electromagnetic radiation with leukemia. It is crucial, particularly during public health emergencies, that both researchers and publishers carefully consider the ethical and social implications of research that is being reported.

PUBLICATION ETHICS

There is substantial literature on publication ethics,¹ but five principles are particularly salient in the current context.

Ensure Scientific Accuracy and Validity

Publishing inaccurate or scientifically invalid research is unethical because that research contributes to an evidence base that may be used to inform response efforts. Typically, the way to ensure scientific validity is through peer review. Yet, in the context of public health emergencies, peer review may be challenged because of a lack of expertise and the need for speed. Indeed, a significant proportion of articles being rapidly published on COVID-19 are being published without peer review.⁷ Where rigorous peer review is not conducted, a designation should be employed to inform readers so that they are made aware of any limitations to the assessment of scientific accuracy and validity. Journals should also have mechanisms to identify errors in published work and should publish corrections when errors could affect the

interpretation of research results. This might also include removing an article found to be scientifically invalid from archives and Web sites.

Ensure Social Value

Publication ethics requires that research be published in a way that promotes social value. In the context of public health emergencies, this means the underlying data of an article must be made readily available to validate the study, inform additional research, and guide response efforts. Editors must ensure that researchers make a firm commitment to make the data publicly available as a requirement of publishing the article with minimal or no review.

Protect Participants and Affected Communities

Publication ethics has a role to ensure that research involving human participants was conducted ethically. Journals should ensure that research involving human participants has received ethics review and approval by relevant bodies. In addition, editors, peer reviewers, and authors should consider the ethical issues raised by the research, including issues related to confidentiality but also issues related to stigma and discrimination of affected communities.

Transparency

Transparency is often required in terms of disclosing sources of funding, who performed the work, and other sources of potential conflicts of interest. It also requires explicating the limitations of the data, the study, or both. These are important in the context of public health emergencies as well. Transparency should also apply to other

considerations previously raised, including transparency of data and peer review.

Accountability

Finally, researchers, journals, and journal editors must take accountability for the information published and disseminated and commit to rectifying any identified inaccuracies.

Adhering to the principles of publication ethics does not mean that important scientific findings in an emergency ought to be delayed, much less suppressed or censored. Ethics actually requires rapid and timely publication, but within a set of universal principles. Publication ethics in an emergency calls on researchers and publishers to carefully consider the limitations and implications of what is being published and how it is being published. This ethical imperative is particularly critical in the context of public health emergencies during which fear and stigma often arise because of ignorance or misinformation and the effectiveness of our measures to rapidly contain the disease is critical but relies on the public's support of those measures. **AJPH**

Maxwell J. Smith, PhD, MSc
 Ross E. G. Upshur, MD, MSc,
 MA
 Ezekiel J. Emanuel, MD, PhD

CONTRIBUTORS

The authors contributed equally to this article.

CONFLICTS OF INTEREST

The authors have no conflicts of interest to disclose.

REFERENCES

1. Committee on Publication Ethics. Code of conduct and best practice guidelines for journal editors. Available at: http://publicationethics.org/files/Code_of_conduct_for_journal_editors_Mar11.pdf. Accessed February 24, 2020.
2. Lei R, Qiu R. Chinese bioethicists: silencing doctor impeded early control of

coronavirus. 2020. Available at: <https://www.thehastingscenter.org/coronavirus-doctor-whistleblower>. Accessed March 22, 2020.

3. Rothe C, Schunk M, Sothmann P, et al. Transmission of 2019-nCoV infection from an asymptomatic contact in Germany. *N Engl J Med*. 2020;382(10):970–971.
4. Bai Y, Lingsheng Y, Wei T, et al. Presumed asymptomatic carrier transmission of COVID-19. *JAMA*. 2020; Epub ahead of print.
5. Kupferschmidt K. Study claiming new coronavirus can be transmitted by people without symptoms was flawed. *Science*. 2020; Epub ahead of print.
6. Bauchner H, Golub RM, Zylke J. Editorial concern—possible reporting of the same patients with COVID-19 in different reports. *JAMA*. 2020; Epub ahead of print.
7. Sharma M, Scarr S, Kelland K. Speed science: the risks of swiftly spreading coronavirus research. 2020. Available at: <https://graphics.reuters.com/CHINA-HEALTH-RESEARCH/0100B5ES3MG/index.html>. Accessed February 24, 2020.