

Publication ethics in public health emergencies

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ABSTRACT

In this article, we describe and analyse three issues in publication ethics that are raised when conducting research in emergencies and disasters. These include reluctance to share data and samples because of concerns about publications, loss of individual authorship in high high-profile multi-entity publications, and the deaths of authors during dangerous research projects. An emergency research pledge may be useful in avoiding some of these issues.

Keywords publication ethics, emergencies, disasters, Ebola, research integrity, authorship, datasharing

Introduction

During the Ebola outbreak, it was recognized that the public health systems of the affected countries were not up to the task of handling the epidemic, and that only international collaboration involving the WHO and experts from various countries had any chance of getting things under control. Among the many other lessons that can be learned from the outbreak and from what different organizations did right and did wrong, one has not yet been discussed: several important and new publication ethics issues, which could also occur in other public health emergencies, arose during the Ebola outbreak. They affect not only individual careers, but also clinical and public health outcomes. There are three main points of ethical interest: the way in which the need to make data publicly available via open access can pose a threat to both future publication in journals and to data-sharing by cautious authorities and researchers; the fact that junior researchers are not being given full credit for their work because of the multi-agency collaborations that result in publications; and the deaths of researchers in the course of their work, and how this loss affects publication.

Publications and reluctance to share data and samples

Genomic sequencing researchers have expressed surprise regarding the lack of data made available for use by

researchers worldwide. Yowziack and colleagues published their initial genomic data on Ebola online in an open access forum as soon as possible, and were disappointed to find that no one else in their field did the same.¹ In addition to concerns about ownership of data and patient consent,¹ reluctance to share data at this early stage is probably due to two factors: reluctance to have other collaborators work with one's data and use it for publications without according sufficient credit, and the fact that many journals refuse to publish data that have already been disseminated. Ewan Birney has argued that "Typically, scientists try to do the best science they can, with a limited set of collaborators, to earn grants and publications to do what is best for science, their own careers and their own laboratories....What is important is the community resource, not individual success. This requires a shift in perspective to a common goal of data output rather than publications."²

These issues are not unique to public health emergencies, but they are particularly relevant in the context of the Ebola outbreak and similar situations because data and sample sharing between teams and ideally open access to data are essential in order to facilitate rapid analysis and decision-making regarding disease prevention and treatment strategies.³ It is understandable that researchers might be

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reluctant to share data, but in this context failure to do so could cost lives. It is vital that steps are taken to remove barriers to data-sharing in order to avoid this effect. Fear of losing publishing priority is at the root of both the reasons behind this withholding behaviour, and Yowziack has suggested that one safeguard would be for researchers “to request that data users (and publishers) honour the publication intentions of data producers”.¹ Such priority might also be protected via an updated version of the “*pli cacheté*”, where researchers could deposit results with publishers in an encrypted file.⁴ But these approaches are both based upon attaching the usual very high importance to publications, and upon limiting access to data to chosen teams of researchers, both of which are problematic in the context of an emergency where thousands of people’s lives are at risk.

When lives are at stake, the publication paradigm must change. Some type of “emergency research pledge” is required, whereby both researchers and journals promise to abandon usual concerns because the public good and the duty to save lives override individual interests. Under such an oath, researchers would pledge to impose a temporary moratorium on publication concerns, and journals would pledge to disregard any data-sharing that takes place during the emergency. Journals could even enforce sharing attitudes by publishing articles only if the researchers can prove that they shared data.⁵ This approach would enable all researchers to share their data in an open access forum, maximising the potential research benefits. After the immediate emergency has passed, ‘normal’ practice could resume. The emergency research pledge, or any other rules governing data sharing in these contexts, should stipulate that the original data “collectors” or data “owners” are appropriately credited and offered inclusion in further data analysis and work on future publications leading to authorship, as appropriate according to present authorship rules. It should also be made clear with whom data should be shared, in particular public health authorities that need the data to improve planning of prevention and emergency health care.

Some of the barriers to sharing of data seemed to have risen in the context of confidentiality requirements imposed by commercial entities.⁵ The emergency research pledge should address this point and stipulate that signing such confidentiality agreements in the context of a public health emergency amounts to unethical behaviour or even scientific misconduct given the fact that such confidentiality corsets not only delay the advancement of scientific knowledge, but may cause preventable deaths of community members and fellow researchers in the affected regions.

Loss of individual authorship in high-profile multi-entity publications

Assuming that researchers are willing to collaborate with one another, the politicized nature of team publications between high-profile institutions including leading universities and the World Health Organization raises another issue. Neil Ferguson has stated that young researchers working during the Ebola outbreak did not get the recognition that they normally would receive because of the highly politicized environment of urgent multi-institute collaboration.⁶ This is because group names were used for authorship, so young researchers who would normally have their own names on the author list we are instead reduced to being members of a consortium who may be mentioned only in the acknowledgements or online. (Note that this is not to say that such young researchers are “ghost authors” who are denied credit for their work - a well-documented problem.) Of course, junior researchers sometimes struggle to gain recognition for their work in other contexts, and the researchers in question here might accept the situation. But in the context of vital Ebola research, the relative lack of recognition is ironic because it means that their recognition is inversely proportional to the importance of their work. A potential remedy might be for such authors to draw attention to this issue on CVs and grant applications. Perhaps one must be pessimistic and admit that, in the context of our call for an emergency research pledge, junior researchers would (as most do) simply have to accept that there are more important things than publication credit during emergencies (even if such a pledge would potentially disadvantage them more than other researchers).

A more ethical alternative—which might be more effective in inducing behaviour changes given the fact that human nature is profoundly self-interested - would be containing a rule within the emergency research pledge mandating contributorship statements rather than traditional authorship on any papers relating to the emergency. Contributorship statements have been described as a more ethical and accurate means of attributing credit for research than out with the context of emergencies,⁷ but they also represent a potential solution to the problem of junior researchers not getting credit. In emergencies, teamwork is essential, so if the aim of the oath is to temporarily suspend self-interested behaviour that prevents data sharing, it makes sense to adapt traditional concepts of authorship and attribute authorship and eventually “career credits” based on contributorship instead, ensuring that the names of junior researchers are featured more prominently at the start of the resulting article. This would liberate junior researchers from some of the

unfairness brought about by working in such large collaborations, but is perhaps rather ambitious given some journals' tendency to be resistant to change.

Another solution might be to create a new mechanism of scientific credit for emergency situations that will serve public health goals and attribute appropriate credits to young scientists. While there have always been scientists who are altruistically motivated to help in emergency situations, it would be even better to ensure just rewards by ensuring some form of career compensation mechanism. This could be achieved by some form of publication facilitators for the future, e.g. by creating emergency "consortia" and opening future opportunities for more active individual authorship to all researchers involved in data collection and sharing during the emergency period. The exact details would need to be defined. The aim is to provide incentives: data sharing and participation in large collaborations should result in better opportunities to obtain individual authorship and not—as it is the case at present—have career disadvantages because of a loss of credit for publications.

The deaths of researchers and potential effects on publications

Finally, it is a sad fact that Ebola researchers and health-care personnel sometimes die during the course of their work; the *Lancet* devoted the cover of one issue to a memorial for such victims of Ebola. Of course, researchers die from natural causes and in accidents unrelated to their work all over the world, but in the case of public health emergencies such as Ebola there is a real risk that the subject of investigation will be the cause of a researcher's death. It might seem irrelevant given the loss of such brave people, but their deaths raise three potential problems with regard to publication ethics. First, colleagues might (perfectly understandably) overestimate the contribution that deceased colleagues made to a project, and thus misattribute authorship to a minor extent. This would clearly be only a minor violation of authorship rules. Worse would be a situation where the deceased person's contribution might be underestimated, which could happen if publication takes place months or years after the death. One potential avenue for avoiding this latter effect (and indeed for explaining the former one) would be for coauthors to act as if the deceased had continued to contribute beyond the point of death. However, even if coauthors judge the contributions of their deceased colleagues perfectly, there is another hurdle to overcome: most authorship criteria and journals require all authors to have approved the final

version of a manuscript. This is clearly not possible when one or more authors are deceased. But journals should be happy to offer waivers, given the exceptional circumstances of such cases. (Only after public health emergencies are over would concerns about giving due credit to deceased researchers come into play.)

Conclusion

There are many more important things to think about during public health emergencies than who will be first and last author on resulting publications. But the points raised in this paper concern not only such minor issues, but also major ones that are clearly worth bearing in mind during any major public health emergency.^{8,9} We have illustrated how junior researchers can be disadvantaged by participation in research concerning epidemics due to the political nature of large collaborations, and how researchers who die from the very disease that they are investigating could raise authorship issues for their surviving collaborators. But most important of all is the issue of reluctance to data-share because of concerns about publication issues, which could directly lead to slower, less efficient collaborations, the waste of valuable research data and the potential loss of life. The right publication ethic in public health emergencies is to forget about publications and focus exclusively on the common good, but that is unrealistic as the truly altruistic researcher is rare. Therefore, we have suggested several measures for both researchers and journals which will allow scientists to temporarily suspend concerns about publications in a fair and just way. An emergency research pledge to abandon usual publication concerns may be the ethical solution to this challenging issue.

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References

- 1 Yozwiak NL, Schaffner SF, Sabeti PC. Data sharing: make outbreak research open access. *Nature* 2015;**518**:477–79.
- 2 Birney E. The making of ENCODE: Lessons for big-data projects. *Nature*. 2012;**489**:49–51
- 3 Shaw D, Elger B. Creating a biobank for international radiation disaster research. *Lancet Oncol* 2013;**14**:1042–43.
- 4 Erren TC, Shaw DM, Morfeld P. Analyzing the publish-or-perish paradigm with game theory: the prisoner's dilemma and a possible escape. *Sci Eng Ethics*. 2015. [Epub ahead of print]

- 5 Whitty CJM, Mundel T, Farrar J *et al.* Providing incentives to share data early in health emergencies: the role of journal editors. *Lancet* 2015;**386**:1797.
- 6 WHO Ebola Response Team represented by Neil Ferguson. Analysis and modelling to support the Ebola response: lessons learned. *Second Symposium in Integrative Biology of Emerging Infectious Diseases (LabEx IBEID) "Risk Analysis in Current Viral Epidemics"*, Tuesday 22 September 2015, Institut Pasteur, Paris.
- 7 Shaw D, Erren T. Ten simple rules for protecting research integrity. *PLoS Comput Biol* 2015;**11**(10):e1004388.
- 8 Gerickes CA. Ebola and ethics: autopsy of a failure. *BMJ* 2015;**350**:h2105 doi:10.1136/bmj.h2105.
- 9 Satalkar P, Elger BE, Shaw DM. Prioritising healthcare workers for Ebola treatment: treating those at greatest risk to confer greatest benefit. *Dev World Bioeth* 2014;**15**:59–67.