GUIDELINES ON COLLABORATIVE RESEARCH AND AUTHORSHIP

Collaboration can be one of the best things about academic life and one of the most difficult. The difficulties mostly appear when academics try to publish together. Guidelines cannot cover all contingencies or always fix authorship troubles. But there are things they can do. They can articulate the virtues and values that we think are important in research and publication and they can provide principles and processes for action.

This guideline was developed at the Centre for Values, Ethics and the Law in Medicine (VELiM) at the University of Sydney, Australia. It is intended to support researchers in collaborative projects to assign authorship and resolve authorship disputes. It sets out nine principles, a process for having a conversation and reaching agreement, and a process for dealing with disputes.

Publication ethics are important in sole authorship. However the processes described here apply only to collaborative authorship. As collaborative authorship is more common in the sciences and social sciences, these guidelines may be less relevant to the humanities. But whenever researchers collaborate, irrespective of their disciplinary background, the principles articulated in these guidelines will apply.

PRINCIPLES FOR COLLABORATIVE RESEARCH AND AUTHORSHIP

Principle 1: Academic integrity and transparency are paramount

Researchers should be able to justify their conduct to one another, to publishers, and to the broader community. They should deal fairly and respectfully with each other.

Principle 2: Researchers have a responsibility to publish

Researchers have a responsibility to publish their findings. This is because:

a. Knowledge production is the primary purpose of research, so failing to publish undermines the research enterprise;

b. Non-publication fails the funder of research, usually the taxpayer; and

c. Ethical justification for involvement of human participants or animals in research necessitates an expectation that some benefit or good will be produced, most obviously through publication.

Researchers should consider not only whether they have a moral obligation to publish, but whether they may have a moral obligation to publish or disseminate the results of their research in ways that can provide benefit to a wide range of audiences.

Principle 3: Responsibilities are shared in a research team. These responsibilities differ according to one's experience, seniority and role.

Responsibility for publication in collaborative research is shared among team members. However the seniority and experience of those team members determine the nature of their responsibility. In the following description, we contrast 'senior' and 'junior' researchers; this is not intended to deny the complexity or diversity of seniority.[1]

Senior researchers have a greater responsibility in their research teams, by virtue of their experience and their position in the University community. This entails a responsibility to mentor junior researchers, assisting them to become independent productive authors. Senior researchers should:

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[1] For example, while PhD students and new research assistants are generally among the 'most junior' researchers in a team, postdoctoral fellows, early career researchers, or experienced research assistants may be in-between the 'senior' and 'junior' positions we discuss. Seniority and responsibility must be considered on a case-by-case basis.

a. take responsibility for ensuring that authorship is discussed in their teams (see Principle 4);

b. contribute their own original analysis and writing, increasing grant productivity, creating authorship opportunities for other team members, and providing leadership;

c. support junior researchers to improve their own work, thus contributing to the development of their capabilities and independence as researchers;

d. identify and respect the original contributions of junior researchers, conscientiously avoiding any unwarranted authorship claims on a junior researcher's original work;[2] and

e. mentor junior researchers in practical aspects of authorship including managing team dynamics, submitting for publication and relating to editors and reviewers.

Junior researchers also have responsibilities within research teams. Junior researchers should:

a. Recognise that fulfilling their publishing commitments is critical to the present and future viability of their research team;

b. Seek the support they need to permit timely completion of research work and submission of manuscripts; and

c. Work diligently toward the preparation of specific manuscripts as agreed with the research team.

Principle 4: Authorship should be explicitly negotiated from the beginning of a project and throughout a project

Difficulties with authorship generally arise when expectations differ between team members. Research team leaders should initiate discussions about authorship from the very beginning of a project and throughout a project. A team should either agree to implement these guidelines as written, or should agree on and record an alternative set of principles and processes. Expectations about each team member's contribution to research and publication should be made explicit.

Principle 5: Each author on a manuscript should have a reasonable warrant for authorship

VELiM generally supports the International Committee of Medical Journal Editors (ICMJE) guidelines for authorship and contributorship: in particular, the notion of 'warrant' for authorship on a publication. The tradition of 'silent' or 'gift' authorship for people who have made no meaningful contribution contravenes the ICMJE guideline; VELiM publications should not include silent authors.

The following are generally considered warrants for authorship:

a. Substantial contribution to the conception and design, data collection, and/or data analysis and interpretation for that publication, plus

b. Contribution to the drafting and/or revision of the manuscript.

The following are not generally considered sufficient warrants for authorship:

a. Acquisition of funding;

b. Data collection, although qualitative data creation may constitute a warrant if it makes a significant conceptual contribution to the project;

c. Giving feedback on a draft manuscript without contributing to conceptualisation, analysis or interpretation;

d. Payment for services rendered as a researcher or consultant (payment does not exclude warrant, but is not sufficient for warrant);

e. Being a supervisor of an author on the publication; or

f. Being the Head of Department in which the author or authors are employed.
There may be other grounds for deciding that a team member has a reasonable warrant: if so, the reasons should be clearly articulated within the team.

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[2] The only exception is set out at point 4 of the dispute management process below.

Principle 6: Publications need a Principal Author

Generally, preparation of a manuscript is best led by one person. In this guideline, that person is referred to as the Principal Author (PA). One is PA for a particular manuscript, not for a whole project.

Principle 7: Principal Authorship is best shared amongst team members on a research project

When a team plans many manuscripts from one project, principal authorship of these manuscripts should be shared among team members. Having one PA for all papers makes the project team vulnerable if the PA does not deliver, and makes the PA vulnerable to exploitation or unrealistic expectations from other team members. Conversely, all members of a team should have equitable access to PA opportunities, in accordance with their abilities and interests.

Principle 8: Principle Authors are lead authors, and are responsible for practical production tasks

The PA is responsible for leading the writing of a manuscript, and for practical aspects of the publication process. These tasks are described below.

Principle 9: Principle Authors adjudicate warrants for authorship

The PA is responsible for adjudicating warrants for authorship on a manuscript. This includes:

a. Deciding who is named as an author on the publication and in what order authors are listed;

b. Deciding whose contribution is acknowledged; and

c. Fielding any claims or challenges relating to authorship, and dealing with any disputes arising from them.

Processes for managing these responsibilities are outlined below. However, these must be implemented in light of Principle 3.[3]

A PROCESS FOR ASSIGNING AND MANAGING AUTHORSHIP

As outlined above, authorship should be discussed frequently during the course of a research project.

Members of research teams can produce sole author publications from team projects. If individuals wish to publish sole-authored papers from a group project they should discuss this with the research team.

More commonly, the group will decide on specific papers to be published, and allocate an authorship team and PA to each paper by unanimous agreement. Ideally, this will occur before writing commences.

The following process should be used.

1. A proposal for a specific manuscript or manuscripts is generated. Members of the project team have an opportunity to nominate themselves as co-authors for each specific manuscript.

2. The project team agrees on a principal author (PA), co-authorship team, scope, target journal and timeline for each manuscript.

3. The team ensures that PA responsibilities are shared equitably across planned manuscripts.

4. If the PA is a junior researcher, they should have a mentor assigned to assist them with the preparation of the manuscript. This may be their PhD supervisor or work supervisor, but can be another member of the team. This mentor should meet regularly with the junior PA to support them to draft the manuscript.

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[3] Principles 3 and 9 must be read together. Junior researchers should have the opportunity to act as PA, including managing the dynamics of the authorship team. However it is not reasonable to expect that junior researchers should independently adjudicate the authorship warrants of more senior and more powerful researchers. All junior researchers with PA responsibilities should have an identified mentor for those responsibilities (see process for assigning authorship, below). Their mentor should guide and support them to carry out those responsibilities, including being actively involved in negotiations if required.

5. The PA leads preparation of the first draft of the manuscript. The PA provides all members of the co-authorship team with fair opportunity to meaningfully participate in preparation of this draft. The PA should ensure that a sound working draft in journal format has been prepared when 75% of the allocated total time for the preparation of the manuscript has elapsed.

6. The PA circulates this draft to all co-authors, responds to suggestions and re-drafts the manuscript. Co-authors make timely use of this opportunity.

7. If a co-author believes that significant changes are required to a late draft of a manuscript (for example, reconceptualization of the manuscript or re-analysis of data), this should be discussed with the entire co-authorship team to decide whether or not the proposed changes are necessary.

> **a.** If the team decides that these changes are necessary, they should strive to support the PA to make the changes. If the PA is not able to make the agreed changes to the original manuscript they and the research team may collectively decide that a co-author assume responsibility for being the PA and for redrafting the manuscript.

> **b.** If the team decides that the changes are not necessary, the dissenting author may wish to write a second manuscript that takes the alternative approach that they have proposed. They should consult the team before they do this.

8. Any author may withdraw from any manuscript at any time. Withdrawing authors:

> **a.** should share their reasons with the team unless there are good reasons for not doing so; and

> **b.** should tell the PA whether they would like to be acknowledged.

9. Throughout the writing process, the PA should talk with team members as needed to clarify their likely authorship position on the final manuscript. This may change several times throughout the drafting process. When the manuscript is ready for submission, the PA decides on the final author list, including the order of names. This is best done in collaboration with the co-authorship team; however the PA makes the final decision.

10. The PA is responsible for submission, revision and resubmission processes, including responding to editorial and reviewer critiques in consultation with co-authors. The PA also makes any changes to the final list of authors that may occur during this process. A new author may be added at this stage if they make a contribution that warrants authorship.

11. The final author list may be different from the original list of co-authors. The PA's decision about authorship should be guided by the following:

> **a.** All named authors should have a warrant as defined above;

> **b.** The PA should discuss reasons for changes in authorship.

> > **i.** Alteration in the order of authors should be discussed with the entire authorship team.

> > **ii.** The addition of authors should be discussed with the entire team.

> > **iii.** Omission of authors should be discussed with the co/author(s) who have been omitted, rather than with the whole team (to avoid potential embarrassment).

> **c.** These discussions should be conducted amicably and should be concerned only with contribution to the publication in question.

> **d.** The PA's decision regarding the order of authors should reflect the contribution that each author has made to the paper, in accordance with their warrant and the following:

> > **i.** If all or some of the co-authors have contributed equally but differently, they should be listed in random order (random selection is fairer than alphabetical order and should ideally be implemented at a team meeting).

> > **ii.** Where some authors have made a greater contribution than others, the research team may decide to assign the first two-three authors according to contribution and thereafter use random allocation to determine the order of authors.

> > **iii.** Where two authors have made a greater contribution than others, but have contributed equally, some journals may allow attribution of 'equal first authorship' by use of footnotes.

iv. It is the PA's prerogative not to place her/himself first. This may occur, for example, when contributions to authorship are equal and there are other reasons to place someone else first, for example, to accommodate differences in norms between disciplines and/or in the interest of career development.

12. Acknowledgements.

a. The PA is responsible for deciding who should be acknowledged rather than named as an author;

b. All contributors who do not meet the warrants for authorship should be acknowledged. These include persons who provided technical assistance, proof reading, useful conversations or general support;

c. Financial and material support should be acknowledged; and

d. The contribution of research participants to the success of the project should be acknowledged.

13. The PA should keep a reasonable record of drafts and contributions.

14. If a disagreement arises concerning the author list and this disagreement cannot be settled by amicable negotiation within the team, the following process for managing disputes should be followed.

A PROCESS FOR MANAGING DISPUTES ABOUT AUTHORSHIP

Team members should recognise that a PA has responsibility and authority over the final author list. However:

1. The PA may choose to transfer their role to another researcher.

2. The decisions of the PA may be challenged. Challenges should be:

a. supported with reasons and evidence;

b. conducted openly, as part of a formal research meeting; and

c. handled as reasonably and amicably as possible.

3. Co-authors who are more senior than the PA should take special care not to use their relatively greater power to coerce the PA regarding authorship decisions. All team members should be alert to prevent such coercion, which is an abuse of trust.

4. If the PA does not have a working draft prepared when 75% of the allocated time has elapsed, the co-authorship team may reasonably consider reallocating PA status for that specific manuscript. This decision must be made collectively by the whole authorship team. It cannot be made unilaterally.

PA status can be reallocated only when:

a. The team has set clear goals at the outset, including the specific manuscript to be prepared and the date by which it should be prepared; and

b. In the case of a PA who is a junior researcher, the PA has received appropriate support and assistance from their appointed mentor.

If PA status is reallocated, the original PA has a responsibility to provide their existing work to the new PA and support them to develop the final manuscript. The original PA may retain their warrant for authorship, but is unlikely to be first author.

5. If agreement cannot be reached to the satisfaction of all parties, the challenger(s) and/or the PA should make a joint submission, or separate submissions if necessary, to the VELiM Director that:

a. outlines the perceived problem, and

b. proposes how these guidelines should be modified in order to prevent repetition of any similar problems in future.

6. If the dispute involves the Director, it should be referred to another senior member of the VELiM academic staff.

7. If the dispute cannot be resolved to the satisfaction of all parties within VELiM, the matter should be referred by the Director to the appropriate person in the Sydney Medical School for external mediation, in consultation with the disputing parties.

8. Once an authorship dispute is referred for external mediation, the appropriate University guidelines will apply, and members of VELiM will be expected to abide by them.

List of other resources

1. Committee on Publication Ethics. Guidelines on good publication and the Code of Conduct. Available from: http://www.publicationethics.org.uk/guidelines

2. Uniform Requirements for Manuscripts Submitted to Biomedical Journals: Writing and Editing for Biomedical Publication (Updated February 2006). Available from: http://www.icmje.org/

3. Tim Albert and Liz Wager (2003). How to handle authorship disputes: a guide for new researchers. Committee on Publication Ethics. Available from: http://www.publicationethics.org/resources/guidelines

4. Street JM, Rogers WA, Israel M, Braunack-Mayer A. (2010) Credit where credit is due? Regulation, research integrity and the attribution of authorship in the health sciences. Soc Sci Med. 70(9):1458-65.