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VIEWS & REVIEWS

PERSONAL VIEW

The ICMJE's definition of authorship is illogical and unethical

David Shaw *lecturer in ethics, Faculty of Medicine, University of Glasgow, Glasgow G2 3JZ, UK*

In recent years there have been many revelations about ghost authors, who contribute to publications but are not credited, and guest authors, who do not contribute but are credited. Most medical and many other journals adhere to the authorship standards set by the International Committee of Medical Journal Editors (ICMJE), which were designed in part to combat the phenomena of ghost and guest authorship. However, the current criteria set for authorship by the ICMJE have their own problems.

Imagine that Andrew, Michael, and Chris decide to collaborate on some research. Andrew has had a brilliant idea for a study, and he and Chris carry it out successfully. Michael writes a paper based on their results and analysis, and Chris checks and corrects it. All three approve the final draft. They are aware that their paper is of great importance, so they decide to submit it to the *BMJ*. All goes well until they reach the authorship statement stage of the submission process, where they must agree with the statement, "We all meet the definition of an author as stated by the International Committee of Medical Journal Editors." Being ethical researchers, they look up this definition to check that they do indeed meet it. This is what they find:

"Authorship credit should be based on 1) substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data; 2) drafting the article or revising it critically for important intellectual content; and 3) final approval of the version to be published. Authors should meet conditions 1, 2, and 3." (www.icmje.org/ethical_1author.html.)

Andrew meets the first and third criteria; Michael the second and third, and Chris the first and third. But if they adhere to the definition, none of them meets all three criteria: this means that they cannot in good conscience tick the box that says they do, which in turn means that they cannot submit their paper—neither to the *BMJ*, nor to any journal that adheres to the ICMJE definition. If any of these journals proved a little flexible, they might perhaps be able to publish their work as an authorless paper, which raises its own problems of accountability. The only way they could submit the paper would be to break a rule and effectively tell a lie—even if that lie is necessary to bypass

an illogical rule. This example should make it clear that the ICMJE definition is indefensible. And it is hardly a far fetched scenario, particularly for analysis and opinion articles. If I suggested a great idea for a paper to a PhD student, and she wrote it up, and I approved it, neither of us would meet the definition of author, despite my conception and her implementation of the idea.

As stated above, the definition is clearly designed to combat guest writers. Anyone who has simply glanced at a draft clearly will not meet the criteria. But the ICMJE casts the net too wide, and actually makes things worse for ghost writers (and PhD students). If an academic suggests a trial, a clinical research organisation carries it out, and a medical writer writes it up, all three are moral authors of the work and should be credited as such (perhaps with the research organisation crediting a lead scientist and listing others in the acknowledgements). And this is the problem with the ICMJE definition: it is unethical.

Having a great idea and sharing it with colleagues and approving what they do with it is clearly to cowrite a paper. Gathering and analysing data is to cowrite a paper. And redrafting and reviewing a paper is to cowrite a paper. If the ICMJE had simply said that meeting one of (1), (2), or (3) was sufficient, it would be a sensible definition. In fact, in the preamble to the definition on their website, it makes two statements that contradict its own criteria.

Firstly, it states that "An 'author' is generally considered to be someone who has made substantive intellectual contributions to a published study." This is quite correct, and Andrew, Michael, and Chris all did so—and so they would generally be considered authors, and the ICMJE's own definition would generally be considered wrong.

Secondly, it states (and emphasises with italics) that, "*An author must take responsibility for at least one component of the work, should be able to identify who is responsible for each other component, and should ideally be confident in their co-authors' ability and integrity.*" Here "at least one component" is sufficient for authorship, so why does the definition itself insist on authors meeting all three conditions? If this is simply an error it is quite an important one.

The example of Andrew, Michael, and Chris illustrates the absurdity of the ICMJE definition. The researchers might have found a cure for cancer but cannot put their names to it because of an outrageous definition, and so cannot publish it. Furthermore, the ICMJE's own words illustrate the lack of logic that has resulted in their contradictory and unethical definition. It is unethical to redefine authorship in this way, and the ICMJE's definition must be changed.

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