Giving up the ghost: exorcising biomedical research articles

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In 2009, medical editors from around the world gathered at a Peer Review Congress in Vancouver, Canada, to discuss, among other things, “ghost authorship” of medical research articles.

Ghost authorship of such articles involves deliberate suppression of the fact that it’s been written by someone other than the named author or authors.

In most cases of academic ghost authorship, (not to be confused with ghost authorship of sporting “autobiographies”), an article is written by a professional medical writer who is commissioned or employed by a pharmaceutical company.

The name of this ghost author is suppressed and the only names that appear on the article are those of researchers.

These “authors” (sometimes referred to as “guest authors”) are often prominent academics who might have been involved in conducting the research, but not in writing the article itself.

Evidence presented at the Vancouver conference suggested approximately one in ten research articles submitted to major medical journals has a ghost author.

The long road to publishing

To understand why this problem arises, it’s necessary to know something about biomedical evidence – how it’s generated and how many parties are involved.

First, a researcher chooses to conduct a particular piece of research. Then a funding body decides whether or not to fund the research and an ethics committee ensures that human research participants or animals involved will be adequately protected.
Once the research has been conducted, written up and submitted for publication, the editor of the medical journal that receives the paper decides whether or not to publish the findings.

These published results may then be summarised, collated with other evidence, and disseminated to doctors through a number of different routes, including formal clinical practice guidelines and pharmaceutical company marketing.

**Different interests**

It’s clear a number of groups – each with their own interest – has a stake in the process of generating evidence for clinical practice. In addition to wanting to help patients by generating information about new treatments:

- researchers need to be at the academic cutting edge in order for their careers to progress;
- government funding bodies need to set politically savvy research agendas;
- journal editors need to maintain the profiles of their journals and;
- pharmaceutical companies need to make money for their shareholders.

While these goals are often complementary, each of these groups also has a competing interest when it comes to the conduct or dissemination of medical research.

At first glance, there’s nothing wrong with having competing interests as such – we all have them. But conflicting interests – interests that stand directly in the way of fulfilling responsibilities – can be a major problem.

An academic or commercial researcher might, for instance, want to publicise research findings that are incomplete or contentious. This could conflict with her duty to ensure that only properly vetted information is released to the public.

But what causes most concern of all competing interests are financial conflicts of interest because they are often considered to be particularly nefarious and generate significant publicity.

This is why the activities of commercial entities such as pharmaceutical companies have been subject to so much scrutiny in recent years.

**The dangers of opacity**

It’s generally recognised that conflicts of interest (financial or otherwise) cannot be eliminated, and that the focus needs to be on ensuring all players are as transparent as possible so they can be recognised and managed.

Of particular relevance to academic ghost authorship is the suspicion – supported by anecdotal evidence – that when research is submitted for publication, equivocal findings are more likely to be given a favourable “spin” if a pharmaceutical company is involved in writing the article.

Journal editors therefore need to know exactly how research has been funded and conducted, and who has been involved in writing it up for publication.
But by ghostwriting an article (or allowing their names to be placed on articles that have been written by others), researchers effectively break the chain of transparency upon which scientific integrity depends.

So the continuing practice of ghostwriting is of enormous concern, and even more so since recent estimates of ghostwriting are no different to numbers from empirical studies in Australia and elsewhere over the past decade.

In our own research, 12% of Australian physicians acknowledged they had participated in research for which the first draft of the manuscript had been ghostwritten.

**No excuse for ghostwriting**

The issue is not simply whether a ghost-written article is accurate, or whether it would have been different had it not been ghost-written.

Ghost-writing betrays the values of openness and accountability — ostensibly “soft” dimensions of science which are nonetheless not simply adornments but play a central role in the objectivity and reputation of the scientific endeavour.

With these concerns in mind, the editors of the medical journal PLoS Medicine have recently endorsed the suggestion that legal sanctions should be applied to those who engage in this fraudulent practice.

Exorcism will not, however, be easy. As the journal’s editors note, authorship guidelines put forth by any journal can be easily subverted.

And journals themselves can perversely benefit from publishing ghostwritten articles because industry-funded studies often have a high profile.

Without concerted action on the part of researchers, funding bodies and journal editors to eradicate this and other practices that subvert transparency, the public will (and should) be concerned about the integrity of the entire process of biomedical research.