Richard Smith: The hypocrisy of medical journals over transparency

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Medical journals generally favour transparency, but we've recently discovered that when there's a trade-off between transparency and their financial interest they opt for the money. The International Committee of Medical Journals Editors, the Roman Curia of editors, wants all <u>clinical trials to be registered</u> and data to be shared. *The BMJ* is so keen on transparency that it has a <u>transparency policy</u> and a declared "commitment to transparency." It also supports the All Trials campaign, which asks that "All trials past and present should be registered, and the full methods and the results reported. We call on governments, regulators, and research bodies to implement measures to achieve this." *Lancet Infectious Disease* calls research transparency a "<u>moral obligation</u>," and the *New England Journal of Medicine* has said that "<u>Transparency...is increasingly considered necessary to improving the quality of healthcare."</u>

We know that the commitment to transparency is less than complete in that most of the journals do not have open peer review and either don't allow scientific studies to be open access or have systems as Byzantine as <u>mobile phone contracts</u>, making it easier to extract maximum payments from confused authors. But what we didn't know until this week is the hypocrisy in relation to studies funded by commercial organisations, usually pharmaceutical companies. Despite repeatedly calling on pharmaceutical companies to make all their clinical trial results fully available, they put a block in the way.

Around 90% of high-impact medical journals will allow academic authors to pay a fee to have their studies open access using an CC-BY licence (which might be thought of as the licence for full open access); but <u>a new study shows</u> that only one of 23 journals with an impact factor over 15 that allows academic authors to publish with a CC-BY licence will offer the same privilege to authors of studies funded by commercial companies, including pharmaceutical companies. The study gives details of the policy of the journals, and it found that they charged between \$3000 and \$5000 for open access, with two thirds of them charging \$5000. Most of these journals also charge for subscriptions, allowing the double-dipping that has boosted the already substantial profits of many of these journals.

A CC-BY licence allows anyone to copy, distribute, transmit, adapt and make commercial use of the material, subject only to an attributing the original publication. There are also NC-BY (non-commercial) and ND-BY (no derivatives) licences, which do not allow posting a research paper on any commercial site, creating derivatives (for example, translations), or exposing content to text- and datamining technologies. These licences create ambiguity, which inhibit use.

Why then do the journals not allow commercially funded studies to publish open access with a CC-BY licence? Publishers are reluctant to give reasons, but some say it's for "ethical reasons." They fear that commercial companies might cite studies selectively. But this argument is unconvincing because it conflicts with the commitment to transparency, would apply as well to academics, can be done anyway with NC-BY and ND-BY licences, and fails to recognise that pharmaceutical companies are tightly regulated in a way that academics are not.

The real reason is money. A CC-BY licence has the potential to undermine reprint sales, which have been extremely lucrative for publishers. Data on reprint sales are hard to come by, but <u>a 2012 study</u> showed, for example, that the *Lancet* in one year had 88 "high reprint sales" ranging from 24 000 to 835 000 copies and the *BMJ* 72 "high reprint sales" ranging from 1000 to 526 000 copies. The median order for the *Lancet* was £287 000 with the highest £1.55 million, while for the *BMJ* the median order was £12 500 with the highest £132 000. (It's worth noting that the US journals, despite their enthusiasm for transparency, refused to release data, but the sales for the *New England Journal of Medicine* are likely to be even higher than for the *Lancet*.) What the study didn't disclose—but I know—is that the profit margin on reprint sales is high—at around 80%. So the *Lancet* by publishing one study and selling reprints for £1.55 million made well over £1m in profit.

The BMJ, very much to its credit, <u>has recently published its total income</u> (£22.8m) and its income from product advertising (£2.7m), commercial sponsorship (0), and reprints (£116 000). It also published the figures for the whole group (which confusingly is called BMJ, while the journal is called *The BMJ*): total income was £77.3m, and the reprint income was £1.98m. No other journal has published these figures—journals are far less transparent than listed for-profit companies. The figures show that reprints are no longer an important source of income for *The BMJ*, perhaps because of its aversion to commercially-funded research, and *The BMJ* could adopt a policy of allowing commercial companies a CC-BY licence without any serious impact on revenues.

What the BMJ figures do not show is profit, and reprints are very much more profitable than product advertising, which often involves high production costs. So the group as a whole might have its finances harmed by adopting a CC-BY licence.

Most of these large reprint sales are to pharmaceutical companies. The companies use the reprints for promotion. We might like to think that doctors will be grateful for being given high-quality science from journals, but my suspicion is that few doctors read reprints. The aim is simply to associate your drug with a prestigious brand like the *New England Journal of Medicine*.

Reprint sales have probably declined since the introduction of the Physician Payments Sunshine Act in 2010 (the data from the BMJ support this conclusion), which requires pharmaceutical companies to disclose financial relationships with physicians, but reprint sales have been and continue to be a major source of profit to many medical journals. This is why they don't allow the CC-BY licence for pharmaceutical companies—because they could then circulate their own reprints.

How should pharmaceutical companies respond? Robert Kiley, Head of Open Research at the Wellcome Trust, suggested this week at the meeting of the International Society for Medical Publication Professionals that the companies simply mandate that their studies be published CC-BY—as Wellcome, the Medical Research Council, and most public research funders do now. Journals will probably then have to cave in and allow publication with a CC-BY licence because they want to publish the research the companies fund as it accounts for about half of biomedical research—and they want the open access fee.

Richard Smith was the editor of The BMJ until 2004.

Competing interest: RS was the editor of the BMJ and the chief executive of the BMJ Publishing Group and has a pension from the BMA, the owners of the BMJ. He has been paid as the chair of OpenPhama <u>https://openpharma.blog/</u>, which is encouraging pharmaceutical companies to promote innovation in scientific publishing. These are, however, my views not those of OpenPharma. Richard Smith