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Many readers of this issue of the *CUAJ* will be looking forward to attending the 71<sup>st</sup> annual meeting of the CUA, being held this month in Vancouver, BC. The academic offerings at the meeting appear to be outstanding and we look forward to celebrating the multidisciplinary collegiality, as well as the research/education advancements that have defined the meeting over the years. However, if you have been following the science sections of several popular news outlets over the last few months, you will recognize that not everyone has been similarly rejoicing in the aura of such scientific inquiry.

As an example, in April 2016, the CBC ran a piece decrying the apparently increasing issue of academic dishonesty in scientific/medical research and, in particular, the phenomenon of manuscript retraction in scientific journals for various offenses. Headlines such as, “I think we have to call it what it is. It is the corruption of the scientific process,” certainly garnered our attention.<sup>1</sup>

This particular CBC exposé highlighted the work of the current, and somewhat controversial, *BMJ* editor Dr. Fiona Godlee, as well as ongoing campaigns to re-envision how scientific information is reviewed, judged, and reported. There has indeed been burgeoning evidence and increasing focus on scientific misconduct, including issues around plagiarism, falsified data and, occasionally, simple honest mistakes leading to manuscript retraction from journals of all different stripes. “Medicine and science are run by human beings, so there will always be crooks,” Godlee is reported to say in the CBC piece.<sup>1</sup>

Without doubt, there are more and more papers retracted from scientific/biomedical journals (up to 400–500 a year), with some estimating that the majority of these are due to some degree of academic dishonesty. For interesting, and somewhat disturbing, reading we would suggest a quick perusal of the blog, “Retraction Watch.” The blog was generated by Ivan Oransky and Adam Marcus in 2010 to shed some light on journal retractions, many of which are often not sufficiently announced or publicized. As of the writing of this editorial, at least one urological article was on the leader board of top 10 referenced articles that had been subsequently retracted. Although article retractions could and should be viewed as a positive mechanism for scientific self-adjustment, the blog also highlights the more nefarious cases of academic misconduct — a symptom of the extraordinary commercial and professional pressures of scientific inquiry and biomedical research. At *CUAJ* specifically, we have endorsed a code of conduct and best practice guidelines of the Committee on Publication Ethics, a link for which can be found on our website. This editorial was run through several online plagiarism checkers!

Concern over retractions of articles for either legitimate mistakes/misinterpretation or more fraudulent motives are only one component of more widespread apprehension over the direction and implementation of biomedical research. Many have voiced alarm around funding and justification of certain drug trials, issues of publication bias, and lack of fulsome reporting of clinical trial results, all of which could potentially lead to inappropriate clinical decision-making and increased healthcare costs, and can create real harm to patients.<sup>2</sup>

In a recent attempt to address at least some of these real issues, the International Committee of Medical Journal Editors (ICMJE) published a proposal in *JAMA* that would require authors publishing in their networked journals to automatically share the de-identified individual patient data that make up the results presented in an article within six months of publication. The rationale for such a mandate would be to theoretically allow early independent analysis and confirmation of results, allowing increased “confidence and trust in the conclusions drawn from clinical trials.” As stated in their

proposal, such fulsome data-sharing would “fulfill our moral obligation to study participants, and we believe it will benefit patients, investigators, sponsors, and society.”<sup>3</sup>

A requirement to hand over individual patient data could address some of the concerns described above, particularly issues around academic dishonesty. The ICMJE has already previously mandated the registration of all clinical trials prior to initiation and enrolment in order avert selective publication of positive results. However, dumping large datasets onto some journal’s server would not necessarily assure timely critical review and re-analysis of most biomedical studies other than the larger and more pivotal/influential clinical trials. Furthermore, a timeframe of six months is likely too little time to allow the original authors sufficient opportunity to consider, scrutinize, and report all planned analyses of larger trials — many of which can take up to a decade from conceptualization to completion. This would likely be a game-changer, particularly for those involved in larger, multicentred clinical trials, given all the time, effort, and costs that define contemporary biomedical research.

Nonetheless, this ICMJE proposal of forced data-sharing has the potential to be a harbinger of real change that arguably is required to carry on tackling the daunting issues around the acquisition and dissemination of new medical knowledge for the betterment of the population as a whole. This is a tough row to hoe. We need to further consider novel responses to address the feasibility and costs of more independent trials, as well as facilitate alternative trial designs to allow investigator-initiated trials to replicate and confirm real-world benefits of our interventions. Similarly, effort is required to find practical solutions to address issues around the publication bias in our medical literature. It has been reported that 96.5% of articles reporting industry-sponsored non-inferiority/equivalence drug trials support an advantage of the sponsor drug.<sup>4</sup> On the flip side, a recent study has suggested that a significant proportion of clinical trials go unpublished multiple years after completion of data collection.<sup>5</sup> Tackling these issues in our increasingly competitive and global research environment is pivotal to addressing the very public concerns around the legitimacy of our work. It seems imperative that we get started now.

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