Is withholding clinical trial results "research misconduct?"

hat is the purpose of medical research? To advance medical science and improve human health? Or to advance research careers and improve industry bottom lines? Because if it's the former, it makes no sense that the results of many clinical trials go unreported, say advocates for greater transparency in medical research.

"It is very clear to me that withholding the results of clinical trials is research misconduct," said Dr. Ben Goldacre, a physician, academic and science writer in the United Kingdom. "This is a great example of a systemic–structural flaw that undermines all of evidence-based medicine, really, but which has been neglected for decades."

Goldacre is a cofounder of the AllTrials campaign, which is calling for all clinical trials — past and present — to not only be registered but to also have their methods and results made public. That campaign recently gained an influential ally. On Apr. 14, the World Health Organization (WHO) issued a statement in support of full disclosure of all clinical trial results, claiming there is an "ethical imperative" to do so.

"Nondisclosure of clinical trial results potentially puts the public at risk through circulation of ineffective or harmful medical products. Nondisclosure slows down the research process for development of life-saving medicines," Vasee Moorthy, a technical officer with the WHO and lead author of a rationale for the new position, wrote in an email to *CMAJ*. "In short, disclosing clinical trial results leads to better-informed science and saves lives."

Even though a large clinical trial can cost millions of dollars to complete, it isn't uncommon for the results to remain private. A 2013 study of 585 registered clinical trials, each with at least 500 participants, found that 29% remained unpublished after a median time of five years. Most of those trials, 78%, had no results available on ClinicaTrials.gov, and industry-sponsored trials were more likely to go unpublished. In total, nearly



Withholding clinical trial results defeats the purpose of medical research, says Dr. Ben Goldacre, author of the books *Bad Science* and *Bad Pharma*.

300 000 people participated in research that can't be accessed by academics, researchers or the public.

"A substantial number of study participants were exposed to the risks of trial participation without the societal benefits that accompany the dissemination of trail results," the authors concluded.

According to some people in the pharmaceutical industry, however, mandatory disclosure of more clinical trial information might lead to problems. It could affect patient privacy, reduce participation in clinical trials and discourage investment in research for new medicines, John Castellani, head of the Pharmaceutical Research and Manufacturers of America (PhRMA), warned in an editorial.

Besides, the pharmaceutical industry already does a sufficient job of reporting summary results and sharing information with regulators, doctors, academics and the public, according to a statement forwarded to *CMAJ* by a media spokesperson for PhRMA. "The

biopharmaceutical sector is proud of its track record of cooperation and looks forward to continuing our collaborative work of researching new medicines to meet patient needs around the world."

RX&D, which represents the brandname drug industry in Canada, supports the submission for publication of all company-sponsored clinical trials, whether the results are positive or negative, according to a statement provided to *CMAJ* by its president, Russell Williams. But to maintain incentives for research, he wrote, companies should be able to withhold some types of information, including confidential commercial information, various business and analytical methods, and information that could jeopardize intellectual property rights.

"Canada's innovative pharmaceutical companies are committed to enhancing public health through responsible sharing of clinical trial data, in a way that: safeguards the privacy of patients; respects the authority of regulatory systems; and

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maintains the incentive to invest in pharmaceutical research and development," read the statement.

Increasing transparency about the safety of prescription drugs has also received more attention of late from the Canadian government, which last year passed the Protecting Canadians from Unsafe Drugs Act, better known as Vanessa's Law. Health Canada is currently working on regulations to determine what information drug companies will have to disclose and where it should be published.

"Vanessa's Law gives the government the authority to make regulations requiring holders of therapeutic authorizations to make information concerning clinical trials or investigational tests publicly available," read a statement forwarded to *CMAJ* by a media spokesperson for Health Canada.

According to Goldacre, however, there has been a startling lack of progress on improving transparency in medical research. So-called discussions on the issue with industry are characterized by obfuscations and delays, he said, and have resulted in fake fixes and superficial codes of conduct with plenty of loopholes.

In an opinion piece released the same day as the WHO's statement, Goldacre called for routine audits of registered clinical trials to determine how many have unreported results a year after completion. The audit data could then be used to identify those who withhold results and expose them to scrutiny by regulators, ethics committees, institutional review boards, physicians and the public.

In the meantime, other health organizations should follow the lead of the WHO and issue public statements in support of greater transparency in medical research, he said. "It's valuable for a public health organization like the WHO to stand up and say this is a real, ongoing problem and it needs to be addressed. And you hope that other people listen." — Roger Collier, *CMAJ*

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