



The legacy of Motherisk

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From 1995 until 2015, *Canadian Family Physician* (CFP) published a monthly column from Motherisk, an organization founded in the mid-1980s by Dr Gideon Koren and his colleagues at the Hospital for Sick Children in Toronto, Ont. At the time, the organization's mission was truly groundbreaking—to research and evaluate the safety of prescription and over-the-counter drugs during pregnancy and breastfeeding. Back then, little was known in the field, and health care providers needed timely, accurate information in order to help and advise their patients.

Over time, Motherisk grew in reputation and influence. Its resources and services grew to include a website, a telephone inquiry service for both the public and health care providers, and regular, concise columns in journals like *CFP*, *Canadian Pharmacists Journal* (CPJ), and *Journal of Obstetrics and Gynaecology Canada*, aimed at serving a practical clinical readership. In 2011 Motherisk was recognized as one of the highest-ranking winners of the Canadian Institutes of Health Research–CMAJ competition for top achievements in health care.¹

In parallel to their work serving the information needs of pregnant women, nursing mothers, and the medical community, in the early 1990s, Motherisk started a forensic hair sampling laboratory, whose findings were used in child protection cases. Over time the laboratory's flawed work came to light and has caused harm to untold numbers of families across Canada, leading to an Ontario provincial commission of inquiry whose report was published in 2018.² Over the past number of years, the research publications from Motherisk have come under increasing scrutiny as the scandal from the forensic laboratory work has unfolded.

Between 1995 and 2015, *CFP* published 240 columns by Motherisk. Most of these articles were traditional, short narrative evidence reviews of medical literature in response to a real or hypothetical clinical query about the safety of a drug or an over-the-counter treatment. None of the articles were the result of original research published by Motherisk, although a small proportion of the articles cited research conducted by the organization.

Canadian Family Physician's ongoing reassessment of Motherisk's contributions to the journal began in 2015 with the 2007 updated algorithm for treatment of nausea and vomiting in pregnancy, leading to an official

correction of the original article.³ In 2019, *CFP* began a systematic review of all the Motherisk content in parallel with the Hospital for Sick Children's own review of articles published by Motherisk in the broader medical research literature. This review has not yet concluded.

The latest concern about Motherisk content published in *CFP* and in other medical journals came to light earlier this summer after Dr Jonathan Zipursky and Dr David Juurlink published a paper in *Clinical Pharmacology and Therapeutics*,⁴ where they reevaluated a 2006 Motherisk case report published in the *Lancet*. The report described a case of infant mortality caused by opioid overdose from breastfeeding attributed to the mother's status as a rapid metabolizer of codeine to the active morphine metabolite.⁵ The findings of the 2006 *Lancet* case report were published as an article in the Motherisk column in *CFP* in 2007 with the aim of reaching family physicians.⁶ They were also published in 2006 in *CPJ* in an article aimed at Canadian pharmacists.⁷

Over the past 4 months, as Scientific Editor at *CFP*, I have worked closely with Dr Ross Tsuyuki, Editor of *CPJ*, to review the 2 articles published in our respective journals in light of the reevaluation of the original *Lancet* case report by Drs Zipursky and Juurlink. The results of our review are described in an accompanying article published jointly in *CFP* and *CPJ*,⁸ and have led us to retract the 2 articles. 

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