

# Reader beware: Rapid reviews have a trust issue

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**Narrative:** This paper arose from us finding a meaningful contradiction in two papers returned during the preparation by one of us (JI) to write on the topic of whether a carefully conceived adjustment would show physical change in the position of a vertebrae as seen on radiographs.

We discuss the two papers, one a systematic review by Corso et al published as a Rapid Review on commission of the *College of Chiropractors of British Columbia* and the other was a traditional, well-researched report by Oakley et al. In essence Corso et al '*found no evidence [for] the use of routine or repeat radiographs to assess the function or structure*' while Oakley et al '*highlight[ed] current and historical evidence that substantiates that X-rays are not a public health threat*'. The two views are in conflict.

Our interest lies in us considering certain radiographs to have high clinical utility to the safe and effective care of the patient, and we use such radiographs as the basis for our 'companion' paper on that topic. We also report serial imaging, a practice Corso et al dismisses.

In this paper we conclude that Rapid Reviews are currently weak as indexed in the literature of Chiropractic and should not be relied on to give a definitive perspective.

**Indexing Terms:** Chiropractic; Upper cervical; Spine; Radiograph; X-ray; Clinical utility; adjustment.

## Introduction

While undertaking our research and due diligence for an associated paper by JI we found a contradiction between two papers we identified to cite. We felt we needed to resolve this contradiction however it turned out to show us a bigger problem which we feel merits this particular paper. In essence, we now warn readers to be wary of any paper published by Chiropractors in the guise of a Rapid Review as we feel they have trust issues.

### The concept of a 'Rapid Review'

Devone et al (1) describe a Rapid Review as a '*pragmatic approach to synthesize evidence in a timely manner to inform decision-making in healthcare*'. After noting '*definition, characteristics, and potential applications of rapid reviews and the trade-offs between speed and rigor*' they conclude '*further*

... this paper arose from us finding conflicting advice in the literature regarding a common practice in Chiropractic and reports our understanding of why poor research published as a Rapid Review should be avoided ...'



1. Devane, Declan et al. Key concepts in rapid reviews: an overview. J Clin Epi. 2024;175:111518. [https://www.jclinepi.com/article/S0895-4356\(24\)00274-9/fulltext](https://www.jclinepi.com/article/S0895-4356(24)00274-9/fulltext)

research is needed to refine and standardize the methods and reporting of rapid reviews'. (2) In other words, the concept of a Rapid Review is relatively new and there are issues in its methods which need further work.

This has not stopped some Rapid Reviews appearing in the Chiropractic literature which we will identify in a moment. The *Cochrane Rapid Reviews Methods Group* holds that a Rapid Review is a '*rapid qualitative evidence synthesis (QES), which uses modified systematic, transparent and reproducible methods to accelerate the synthesis of qualitative evidence when faced with resource constraints*'. (2) We note that this method is not a panacea but a short-cut method designed to suit constrained resources. It seems to us that time and money are the resources that are constrained in the cases of the 3 Chiropractic Rapid Reviews we discuss here.

It is evident that a Rapid Review '*aims to facilitate faster conduct of systematic reviews to meet the needs of the decision-maker, while also maintaining quality and credibility*'. (3) Haby et al warn that '*different methodological shortcuts for undertaking rapid reviews*' increase the '*risk of bias of the results of the review*'. (4) They call for authors to be transparent and we are not sure the authors of the three Rapid Reviews we discuss have been transparent.

We also have concern with Rapid Reviews being commissioned which entails payment (risk of bias) for a result addressing a particular issue of relevance for the commissioning agency, again a risk of bias.

### Evidence in the Chiropractic discipline

We acknowledge that evidence-based practice is a belief-system for some Chiropractors and we see a problem when the evidence is contradictory. We make our first point with two papers addressing the specific question of whether or not there is '*clinical utility of routine spinal radiographs*'. (4) Corso et al found '*found no evidence [for] the use of routine or repeat radiographs to assess the function or structure*'.

On the other hand Oakley et al (5) found Corso's paper seriously flawed, reporting in their rebuttal '*dozens of chiropractic studies that should have been included in the contracted Côte review and hundreds of others that directly apply to modern, evidence-based, and radiography-guided chiropractic clinical practice*'. [Ed note: Côte is an author with Corso]

Thus we shall first look at the Corso Rapid Review (5) undertaken for the *College of Chiropractors of British Columbia to Ontario Tech University*'.

#### *Corso et al: The clinical utility of routine spinal radiographs by chiropractors*

We have noted that Corso's study '*was supported by the College of Chiropractors of British Columbia to Ontario Tech University*' and we subsequently see argument that the *College of Chiropractors of British Columbia* instituted '*radical policy change discriminating against chiropractors who utilise X-rays for reasons other than diagnosing serious medical pathology*'. (5)

Our comment on this change, which is difficult to locate online, is that as of 14 January 2025 the *Health Professions Regulation Act of British Columbia* states, as '*4 (1) A registrant in the course*

- Booth A, Sommer I, Noyes J The Cochrane Rapid Reviews Methods Group and Cochrane Qualitative and Implementation Methods Group (CQIMG), et al. Rapid reviews methods series: guidance on rapid qualitative evidence synthesis *BMJ Evidence-Based Medicine* 2024;29:194-200. <https://ebm.bmj.com/content/29/3/194>
- Haby MM, Barreto JOM, Kim JYH, et al. What are the best methods for rapid reviews of the research evidence? A systematic review of reviews and primary studies. *Res Syn Meth.* 2024; 15(1): 2-20. DOI 10.1002/jrsm.1664
- Corso M, Cancelliere C, Mior S. et al. The clinical utility of routine spinal radiographs by chiropractors: a rapid review of the literature. *Chiropr Man Therap* 28, 33 (2020). <https://doi.org/10.1186/s12998-020-00323-8>
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*of practising chiropractic may do any of the following: ... (e) apply X-rays for diagnostic or imaging purposes.'* (6)

In summary, a seeming regulatory body commissioned a study on which they based a changed condition of practice without realising the study for which they paid was flawed. This sounds remarkably like the *General Chiropractic Council* of the UK (GCC) which maintains advice against teaching or talking about subluxation, based on the failure of its consulting academics to respond to a specific question asked of them. One of us (PE) has addressed this (7) along with others (8) but the fact remains the GCC holds to a flawed position. This is addressed in the new Chiropractic textbook, '*A Philosophy of Chiropractic*'. (9)

It is not the role of this paper to offer a judgement but we do note that Corso et al rushed their work to the point it could only be a '*Rapid Review*' which '*critically appraised*' just 23 papers which reduced to '*Nine low risk of bias studies investigated the validity (n = 2) and reliability (n = 8) of routine or repeat radiographs. These studies provide no evidence of clinical utility*'. (5) Of course they '*found no evidence*' in other peoples' work, a selection bias, and found in favour of the intent of those who paid for the study, a funded bias. Those few papers were also dated, being over 15 years old.

In stark contrast, other authors used established process to thoroughly examine the question in its entirety and '*highlight[ed] current and historical evidence that substantiates that X-rays are not a public health threat*'. (6) So what do we do as clinicians when one group of authors, Corso et al, (5) publish a very different finding to that published by Oakley et al who can reasonably be considered as experts in the field? (6)

We have concluded that this paper by Corso et al is flawed and can safely be ignored in favour of Oakley et al's paper and its truly evidence-based findings. There is another step that we took as authors ourselves and this was to look at other work by Corso, in particular any other '*Rapid Review*' and we were again disappointed. To us, this points to methodological errors within Corso's group and we urge them to do better.

The relevance of this Rapid Review by Corso et al, with Mior and Côté, to our current work is its position '*We found no evidence that radiographs used to assess the function or structure of the spine improves patients' outcomes. Therefore, in the absence of red flags, and given the inherent risks of ionizing radiation, we do not recommend the clinical use of radiographs for the routine and repeat evaluation of the structure and function of the spine*'. (5) One of us (JI) maintains the clinical practice of Chiropractic in which we consider certain radiographs to have high clinical utility to the safe and effective care of the patient. We also report serial imaging, a practice Corso et al dismiss. Notice their fear of ionising radiation, a fear negated by Oakley et al. (6)

*Corso et al: The safety of spinal manipulative therapy in children*

Corso and her colleagues Mior and Côté authored another '*rapid review*' in 2020 which concluded '*It is unclear whether SMT increases the risk of adverse events in children < 10 years*'.

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6. Health Professions Regulation Act of British Columbia. [https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/414\\_2008#section3](https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/414_2008#section3)

7. Ebrall PS. Antagonists, Protagonists, and the General Chiropractic Council: A Pragmatic Narrative of Eminence-Based Chiropractic, J. Philosophy, Principles & Practice of Chiropractic. 2020; July 27: Pages 37-48.

8. Kent C. An analysis of the General Chiropractic Council's policy on claims made for the vertebral subluxation complex. J Philos Princ Pract Chiropr. 2011 Spring;2011(2). <https://www.vertebralesubluxationresearch.com/2011/09/11/an-analysis-of-the-general-chiropractic-councils-policy-on-claims-made-for-the-vertebral-subluxation-complex/>

9. Ebrall PS. A Philosophy of Chiropractic. XLibris. 2024. Soft cover ISBN 979-8-3694-9688-6; eBook ISBN 979-8-3694-9687-9. <https://www.xlibris.com/en-au/bookstore/bookdetails/860585-a-philosophy-of-chiropractic>

(10) We note this study was also biased, being funded by a vested interest, 'We were mandated by the College of Chiropractors of British Columbia to review the evidence on this issue'. (10)

This Rapid Review by Corso et al occurred roughly about the same time as the *Safer Care Victoria* inquiry and indeed they cited Todd's report (11) yet themselves reported nothing not already known, namely 'The risk of moderate and severe adverse events is unknown in children treated with SMT'. (10)

Corso et al noted that 'Methodological differences between previous reviews and our review are important to note because variations in methodology can lead to different conclusions' yet held to their conclusions as being superior, touting the 'strengths of our study'. (10)

Here we feel a caution is warranted for Chiropractic authors to be alert to whether their funding body is mired in controversy, as was the *College of Chiropractors of British Columbia* at that time (12, 13, 14) and to not cheapen their standing by getting involved in a political dispute. It is always unwise to short-cut the methods of a Literature Review to call it a Rapid Review, a point others have made. (2, 3, 4)

The relevance of this paper on safety with children to our current work is its position that 'It is unclear whether SMT increases the risk of adverse events in children < 10 years'. (11) One of us (JI) maintains the clinical practice of Chiropractic and he has reported care of patients ranging in age from 6 months. (15)

*Kawchuk et al: The Effect of Spinal Adjustment/Manipulation on Immunity*

The funding body for Kawchuk et al's Rapid Review was the *World Federation of Chiropractic* (WFC) which no longer holds this review on its website. (16) Similarly the authors, who were at the time members of the *WFC's Research Committee*, are also no longer listed as members of the *WFC Research Committee*. (17)

This position on 'Chiropractic and Immunity' generated much ill-will against the WFC at a time when the world was both physically and psychologically disrupted by a pandemic and has since been convincingly condemned; McCoy and colleagues published a robust position paper (18) and now it seems the WFC's published position has quietly 'gone away'. To rub salt in the wound the

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10. Corso M, Cancelliere C, Mior S. et al. The safety of spinal manipulative therapy in children under 10 years: a rapid review. *Chiropr Man Therap.* 2020;28, 12. <https://doi.org/10.1186/s12998-020-0299-y>
  11. Todd AJ, Carroll MT, Robinson A, Mitchell EKL. Adverse Events Due to Chiropractic and Other Manual Therapies for Infants and Children: A Review of the Literature. *J Manipulative Physiol Ther.* 2015 Nov-Dec;38(9):699-712. DOI 10.1016/j.jmpt.2014.09.008.
  12. Over 200 British Columbia Chiropractors Threaten Legal Action Against Board Over Proposed Mandatory Vaccination Policy. [News] *The Chronicle of Chiropractic.* 9 December 2021. <http://chiropractic.prosepoint.net/177332>
  13. British Columbia College of Chiropractors Attacks Again - This time its Websters, Labor, Birth, Birth Trauma and Hormones. [News] *The Chronicle of Chiropractic.* 29 December 2019. <http://chiropractic.prosepoint.net/168244>
  14. British Columbia Bans X-Rays for Vertebral Subluxation Assessment. [News] *The Chronicle of Chiropractic.* 9 February 2021. <http://chiropractic.prosepoint.net/174555>
  15. Ierano JJ, Ebrall PS. A retrospective study of health outcomes following Atlas Orthogonal chiropractic care: A thematic analysis of the Patient Voice from 393 self reports. *J Upper Cervical Chiropr Res.* 2023 Nov;2023:32-53. *J Upper Cervical Chiropr Res.* 2023 Nov;2023():32-53.
  16. Site search [wfc.org](http://wfc.org). 20 January 2024. Term 'immunity' not found.
  17. Research Committee. WFC., At 20 January 2024. <https://www.wfc.org/research-committee>
  18. McCoy M, Kent C, Senzon S, Ebrall P. A critical evaluation of the World Federation of Chiropractic's fatally flawed review of immunity & chiropractic. *Ann Vert Sublux Res.* 2020 May;2020:59-62. <https://www.vertebralesubluxationresearch.com/2020/05/03/a-critical-evaluation-of-the-world-federation-of-chiropractics-fatally-flawed-review-of-immunity-chiropractic/>

WFC's Rapid Review stating that Chiropractors have no influence over a person's immunity through their care continues to exist on a site called 'Quackwatch'. (19)

This alone does nothing to enhance the reputation of our profession which the WFC is supposedly charged with protecting.

There is no relevance of this WFC review to our current work except serving as an example of how poor a Rapid Review can be; and the fact it exists on an anti-Chiropractic website shows that authors and funding bodies can run but not hide from a weak publication of political expedience.

### Our position on Rapid Reviews

We think it appropriate to advise against taking much notice of future Rapid Reviews; it seems to be an essentially flawed technique to produce a literature review supportive of a particular political position. We arrived at our position while reviewing the literature for our paper-in-process in which we located a study (20) which raises valuable and pertinent questions; whether there is truth in a Chiropractors' belief that they change the position of a vertebrae when they adjust it. Thankfully a study by Young et al is not a Rapid Review and remains a considered literature review, one which interprets what others have done. In spite of presenting no original results from their own inquiry, their review is well done.

#### *Chiropractic's knowledge gap*

We consider Young's to be a useful paper in that it identifies a significant knowledge gap in the Chiropractic discipline, namely, '*what actually happens when the spine is adjusted*'. Indeed, their conclusion is worth citing in large part (see Box 1). The authors, and there are 20 of them, show a thorough methodology which is reported in detail, and clearly state that '*No specific funding was received for this project. Authors have been funded by their respective sites of employment*'.

This is exactly as it should be, academics acting as academics are paid to act, without politics.

#### Box 1: Chiropractic's knowledge gap

It is a common clinical observation that patients can experience sudden relief immediately after SM. In our experience, when this happens, they may ask: '*What exactly happened when you cracked my back*'? As this review describes, there is no easy answer because of the many theories and few facts. Nevertheless, we suggest the following, which clinicians can modify to suit their practice and patients. Regarding anatomical/positional changes, it would be possible to say: '*There is no simple answer, because the spine is a difficult area to study. It seems likely that the manipulation/adjustment causes some physical changes, but it is not known exactly how*'. (20)

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19. World Federation of Chiropractic. The Effect of Spinal Adjustment/Manipulation on Immunity and the Immune System: A Rapid Review of Relevant Literature. 19 March 2020. Held now at Quackwatch [https://quackwatch.org/wp-content/uploads/sites/33/quackwatch/chirobase/02Research/wfc\\_immunity\\_2020.pdf](https://quackwatch.org/wp-content/uploads/sites/33/quackwatch/chirobase/02Research/wfc_immunity_2020.pdf)
  20. Young KJ, Leboeuf-Yde C, Gorrell L, et al. Mechanisms of manipulation: a systematic review of the literature on immediate anatomical structural or positional changes in response to manually delivered high-velocity, low-amplitude spinal manipulation. *Chiropr Man Therap.* 2024;32, 28. <https://doi.org/10.1186/s12998-024-00549-w>

## How Young et al inform us

The findings of Young et al are not a surprise. In a sense they mimic the findings by one of us (PE) from a Systematic Review (21) that there is no material evidence for subluxation. Their phrasing '*It seems likely that the manipulation/adjustment causes some physical changes, but it is not known exactly how*' sits comfortably in our argument for the communication between a Chiropractor and their patient to be a '*fuzzy narrative*'. (22)

Young et al's paper directly informs our current work.

## Conclusion

A new form of Literature Review is emerging in Chiropractic, called the Rapid Review. We identified two papers classified as a '*Rapid Review*' during our preparation for another paper and we located a third rapid review, this time commissioned by the WFC. Thankfully the *WFC Rapid Review* on immunity has disappeared to be replaced by a proper review, (23) and while the WFC has disowned its own review it continues to exist, both on a third-party site and within the rebuttal paper.

Readers are cautioned to exercise a high index of suspicion for incompleteness when reading a paper published as a Rapid Review. There is value in seeking papers by other authors on the same topic and choosing an informed position based on a variety of opinion and findings.

Should it occur, it would seem particularly egregious for a regulatory body to commission a Rapid Review to provide an incompletely informed and potentially biased position on which to base the enforcement of professional standards, especially when such 'standards' significantly differ from what would be shown by a mature evaluation of the literature.

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  22. Ebrall P. Subluxation as a fuzzy narrative. *Asia-Pac Chiropr J.* 2024;4.4. [apcj.net/papers-issue-4-4/#EbrallFuzzyNarrative](http://apcj.net/papers-issue-4-4/#EbrallFuzzyNarrative)
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### *About the chiropractor*

Dr Ierano is a 1997 graduate of Palmer Davenport and is a certified instructor in Atlas Orthogonal Technique, via the Sweat Foundation in Atlanta, USA.

He teaches 'upper cervical specific' in Australia and now practices in Sydney.

### *Also by author Ierano*

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