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# A more inclusive evidence hierarchy for chiropractic

Abstract: The familiar evidence pyramid based on Sackett's seminal work published in 1996 favours the reductionistic medical and pharmacological paradigms to the exclusion of the holistic chiropractic paradigm and patient-centred care.

Twenty-five years on, weaknesses and omissions are identified in the EBM approach and two disciplines (Nursing, Occupational Therapy) have re-defined a hierarchy of evidence and its understanding in their clinical environment.

This paper presents a fresh interpretation of Sackett's premise, describing and depicting with argument that there is a more relevant way to assess evidence in the fields of chiropractic in general and subluxation in particular and that this approach reflects the clinical validity of Palmer's major premise on which the profession is built.

The bottom line is that given the patient-centred nature of chiropractic which is mostly if not always an '*N of 1*' encounter, the chiropractor is obliged to treat the patient and not a guideline. This new hierarchy (pyramid) allows the evidence to be gathered to better support the chiropractic encounter.

Indexing Terms: chiropractic; subluxation; evidence hierarchy; pyramid; spinal adjustment.

## *Preface*

'*Health care is a basic human right. I want to ensure our health systems leave no one behind*'

Obijiofor Aginam M.Law, PhD; Deputy Director, International Institute for Global Health
United Nations University, Shibuya-ku: 2018

*'Life is intelligent action'*

Daniel Palmer, chiropractor, academic
*The Chiropractor*, Los Angeles: 1914 (22, 57)

> *... Sackett's evidence hierarchy is biased against the chiropractic discipline. A new hierarchy is presented which applies the philosophical tools of phronēsis and noetics to reach "practice wisdom" as the apex'*

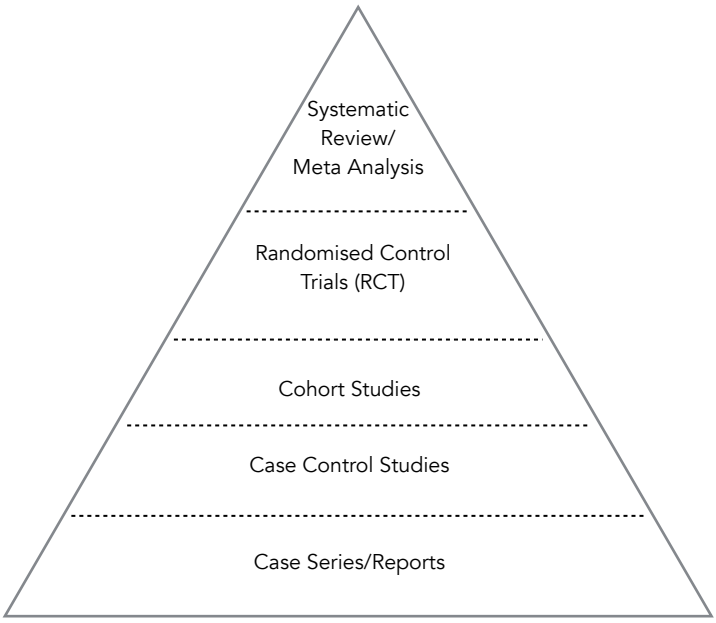
## Introduction

In 1996 Sackett formalised Evidence Based Medicine (EBM) (1) from which an instrument, the Evidence Pyramid or Hierarchy, was built to weigh and categorise evidence. A current iteration of the Sackett Pyramid is given here as Figure 1.

This paper will demonstrate the weaknesses now evident in that instrument to the extent it is no longer useable in chiropractic.

1. Sackett, David L, Rosenberg, William MC, Muir Gray, JA, Haynes R. Brian and Richardson W. Scott. Evidence based medicine: what it is and what it isn't [Editorial]. BMJ. 1996:312):71-2. DOI https://doi.org/10.1136/bmj.312.7023.71.

Fig 1: The evidence pyramid derived from Sackett




My research includes the study of instrumentation. (2, 3, 4) Simply put, an instrument designed to measure one thing is not suited to measure another. It is a truism of science that error is compounded when there is bias built into any instrument. There are two biases built into the '*Sackett Pyramid*' or '*hierarchy*' instrument: inclusion bias, and selection bias. (Table 1)

Table 1: Weaknesses with the Sackett Pyramid of direct relevance to chiropractic

| **Weakness** | **Description** |
|---|---|
| Inclusion bias | Inclusion limited to only one discipline, biomedicine, to the neglect of all clinical health care practices |
| Selection bias | Inclusion of one aspect of the triad with exclusion of two identified by Sackett: the 'patient preferences' and their self-knowledge, and the immense pool of knowledge embedded in 'practitioner experience' |

Regrettably the 'quantitative lobby' of chiropractors dominates the discipline's conversations and excludes qualitative knowledge; it adheres to the Sackett Pyramid. It is reasonable for regular or conventional doctors of chiropractic to seek an instrument that is more inclusive of their clinical practice. Indeed, in 2005 chiropractors Miller and Jones-Harris (5) asked the question, '*Is it time for change?*' Their paper may have seemed impertinent coming within the first decade that EBM and its hierarchy was adopted across medicine, and they failed to get traction for their ideas. Perhaps this was more due to their idea actually maintaining a hierarchy but rather labelling evidence as '*gold, silver, or bronze*'. (5, Fig. 3)


2. Ebrall PS. Moore N, Poole RT. An investigation of the suitability of Infrared Telethermography to determine skin temperature changes in the human ankle during cryotherapy. J Chiropr Sports Med. 1989;3:4-11.

3. Ebrall PS. A determination of the applied laboratory error of the Metrecom computer assisted goniometer. J Chiropr Tech. 1992;22:46-51.

4. Ebrall PS. An estimation of the clinical error for the Metrecom computer-assisted goniometer. J Chiropr Tech. 1993;5:1-4

5. Miller PJ, Jones-Harris AR. The evidence-based hierarchy: It is time for change? A suggested alternative. J Manipulative Physiol Ther. 2005;28(6):453-7.

Sackett mentored Gordon Guyatt who was developing a novel method of teaching medicine at the bedside. His work reflected the implication that clinical decisions at the time were less than scientific, although probably true. He packaged his work that described the core curriculum of the McMaster Residency Program as '*Evidence-Based Medicine*' (EBM). (6) It was realised that a '*deficit existed in medicine: biomedical science often had no translational application to clinical medicine*.'

Guyatt stated '*Evidence based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients … integrating individual clinical expertise with the best available external clinical evidence … we mean the proficiency and judgment that individual clinicians acquire through clinical experience and clinical practice … (and) the more thoughtful identification and compassionate use of individual patients' predicaments, rights, and preferences in making clinical decisions about their care*'.

Tonelli and Callahan make the point '*the knowledge gained from population based studies may not be the best way to assess certain CAM practices, which view illness and healing within the context of a particular individual only.*' (7) An examination of Figure 1 shows no overt consideration of the patient or practitioner.

There has been a suggestion the chiropractic profession should become more evidence based. (8) A '*soft-resistance*' to the concept of EBM is given by Walker as being a change in terminology to '*evidence influenced practice*,' and a hard resistance as being a claim that the best evidence is that based on practice experience and not research.

In this paper I present a '*harder resistance*' to Walker stating that his views are opinions not based on evidence, are not warranted, and would perpetuate impediments to chiropractic.

## Weaknesses of the current hierarchy

The over-riding weakness of the evidence hierarchy today is that it is driven by quantitative biomedical reporting which by default excludes the burgeoning qualitative literature and the vast amount of literature prepared in the traditions of Eastern philosophies. It is only now that the distinctions have been explored, (9) the most basic rationale being to '*broaden the diversity of voices and cultural perspectives admitted*' (10) into conversations about '*health for all*'.

For chiropractors the classic loss of information arising from the belief there is only one 'evidence pyramid' and that it is flawless is seen with the *General Council on Chiropractic* (GCC), a British regulatory body. This group, through a fatally flawed process, expressed their opinion that '*there is no evidence*' for subluxation. I have previously addressed this travesty (11) but to little avail as their damaged stream of thought continues in some parts of the profession today.

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6. Sur RL, Dahm P. History of Evidence-based Medicine. Indian Journal of Urology 2011;27(4):487-9 available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3263217/.

7. Tonelli MR, Callahan TC. Why alternative medicine cannot be evidence-based. Academic Med. 2001;76:1213-20.

8. Walker BF. The new chiropractic. Chiropr Man Ther. 1026;24. DOI 10.1186/s12998-016-0108-9.

9. Emmanuel SM, Ed. Philosophy's big questions. Comparing Buddhist and Western Approaches. Columbia University Press, New York. 2021.

10. Kalmason L. Foreword. In, Emmanuel SM, Ed. Philosophy's big questions. Comparing Buddhist and Western Approaches. Columbia University Press, New York. 2021.

11. Ebrall P. Murakami Y. A Critical analysis of the Reality Distortion of chiropractic among scientists with constructive criticism of the current debate. J. Phil Princ Prac Chirop 2019;July 11:1-11. https://www.vertebralsubluxationresearch.com/2019/07/10/a-critical-analysis-of-the-reality-distortion-of-chiropractic-among-scientists-with-constructive-criticism-of-the-current-debate/

A second and significant weakness is the increasing distance of the *Pyramid of Evidence* from the patient. The most extreme example is the reduction of 'evidence' into bland statements gathered under the banner of '*Choosing Wisely*', a movement sweeping the globe akin to that of 'climate change'.

An example may be taken from *Choosing Wisely Australia*, (12) the mantra for which is '*More is not always better when it comes to healthcare*'. While the intent to reduce unnecessary tests may be laudable, the result is that panels of experts remote from the patient generate an 'evidence-based' guideline without any patient in front of them. In effect, the patient and their individual needs are removed from the process of guideline-making, replaced with a reliance on chance and likelihood as we see with the imaging recommendation for people with low back pain.

It states '*1. Don't request imaging for patients with non-specific low back pain and no indicators of a serious cause for low back pain.*' (13) The reliance on chance is given as '*In people who present to primary care with low back pain, medically serious disease is uncommon*.' The exclusion of even a possibility there may be a functional disorder appropriate for chiropractic identification and management is ignored, with the advice '*Patients with a higher likelihood of medically serious disease as the cause of their low back pain can be identified by red flags*'.

The clinical decision making process is reduced to a directive. Worse, the directive lacks granularity; it refers to 'imaging' with no distinction of an X-ray called the 'AP Lumbar' view from a 'Lateral', no mention of the role of 'Lumbar Oblique' views, no mention of 'spot' views, and no consideration of 'Pelvic', 'symphysis pubis', or 'SIJ' views. These views may mean little to the therapists who developed the guideline (10) but are immediately recognised by doctors of chiropractic to each carry specific clinical meaning.

The process of patient assessment has been turned inside-out. The patient is excluded by an evidence-based guideline until a box is checked that may allow their inclusion. The diagnostic acumen of the clinician is demeaned to the level of a therapist, and the very idea of the clinician reading the literature to inform themselves is removed. But never mind, the American guidelines require the therapist to *classify* LBP (14) which is arguably not possible in the absence of imaging, and to refer any case that is *complex*, (15) whatever 'complex' may mean.

The value of the evidence hierarchy has shifted from the patient to remote panels of experts, considered to be an advancement in patient care. A reason is likely to be the simplification of payment categories for compensated patients, for which the downstream effect is the additional time required by a conscientious practitioner explaining basic matters such as '*what is a spinal x-ray*' with the inference being '*why should we pay for it?*' Never mind, the reimbursement company also pays for that practitioner's time to explain the obvious.

These matters combine with what seems to be a laissez-faire attitude to the evidence that does exist. Regardless of its nature, quantitative-based researchers in chiropractic (16) revert to the

12. Choosing Wisely Australia. Home page. Accessed 19 October 2021. URL https://www.choosingwisely.org.au.

13. Choosing Wisely Australia. Recommendations. The Australian Physiotherapy Association. Accessed 19 October 2021. URL https://www.choosingwisely.org.au/recommendations/apa1.

14. Delitto A, George SZ, Van Dillen L, et al. Low back pain. J Orthop Sports Phys Ther. 2012;42(4):A1-A57. DOI 10.2519/jospt.2012.42.4.A1

15. Oliveira CB, Maher CG, Pinto RZ, Traeger AC, Lin CC, Chenot JF, van Tulder M, Koes BW. Clinical practice guidelines for the management of non-specific low back pain in primary care: an updated overview. Eur Spine J. 2018 Nov;27(11):2791-2803. DOI 10.1007/s00586-018-5673-2. Epub 2018 Jul 3. PMID: 29971708.

16. Jenkins HJ, Downie AS, Moore CS, French SD. Current evidence for spinal X-ray use in the chiropractic profession: A narrative review. Chiropr & Manual Ther. 2018 ;26(48):1-11. https://chiromt.biomedcentral.com/articles/10.1186/s12998-018-0217-8.

biomedical Sackett pyramid and its associated hierarchy as their tool for judging the merit of certain findings. Chiropractic researchers believe they can only weigh evidence in the one language of Sackett and can not see beyond the established biomedical hierarchy.

The defining weakness of the existing pyramid is that its use is now always supplanted by the meta-analysis, (17) an encompassing approach that over-rides all lower levels of the hierarchy and reinforces the exclusion of the practitioner and the patient. Worse, the 'language of evidence' now prefers Systematic Reviews or Meta-Analyses, and any reference to 'considering the patient' is offered as a platitude. All other evidence is ranked too low to be admitted.

It is now 25 years on and there has been sufficient time to identify the weaknesses (Table 1) and for chiropractic and related disciplines to propose new models or offer refinements to the original model. I propose that chiropractic flips the emphasis from the 'outside-in' perspective driven by categorised quantitative literature, to an 'inside-out' model driven by philosophical thinking that completely integrates the patient with the practitioner and considers all literature including qualitative reports.

The key feature is that the weighting given to the literature is at the practitioner's discretion to allow the most relevant match between an individual patient and previous encounters, shifting clinical practice back to the mode of 'specific to general' instead of the current 'general to the specific' as one has to do with large cohort studies.

This new model also addresses the two significant weaknesses (Table 1) in the Sackett model as it has evolved over a quarter of a century.

## Correcting the error

The Sackett Evidence Pyramid has come to limit scholarly inquiry to one class of methodologies, quantitative. This means, in rough terms, at least half of the world's science-derived evidence for subluxation, obtained and interpreted in the qualitative manner, is excluded. The new Pyramid addresses this by forcing the outcomes from the methodology presumed strongest, the RCT, to be filtered in the same manner as all evidence, through the lens of the patient and the practitioner. This removes the artificial tiers within the flawed Evidence Pyramid and respects all science as science.

A very basic example lies in the effectiveness of triage and treatment in the Emergency Department informed by the *practice wisdom* of nurses; a patient presents with a condition that passes through the filters of practice based knowledge (*phronēsis*) about the condition, and that indefinable clinical gem, common sense or nous (*noetics*). Clinicians do not have time to undertake their own mini-meta-analyses of the literature between the time of presentation and the imperative for intervention.

It could be argued that a clinician should be on-top of all literature and then adapt downwards as they deem reasonable. This argument is fallacious as it contradicts the very process it is meant to serve, a guide to best treatment. It actually requires the presenting patient to be matched downwards on multiple criteria from a large cohort and there are long odds at achieving this, especially when there are so many cohort trials now, each with a subtle difference (and sponsor).

Application of an RCT, the supposed pinnacle of clinical judgment drawn from large cohorts, is flawed by the need to modify and adopt its findings downwards to the immediate individual patient presentation. It seems more logical to start with the individual patient and search upwards across all literature to identify a reasonable match or precedent. The popularity of a particular study should not imply a rubber-stamping of patients to fit it.

17. Berlin JA, Golub RM. Meta-analysis as Evidence: Building a Better Pyramid. JAMA. 2014;312(6):603–6. DOI 10.1001/jama.2014.8167.

## Selection bias as exclusion

The second flaw of the outdated pyramid lies with it excluding the two elements identified by Sackett:

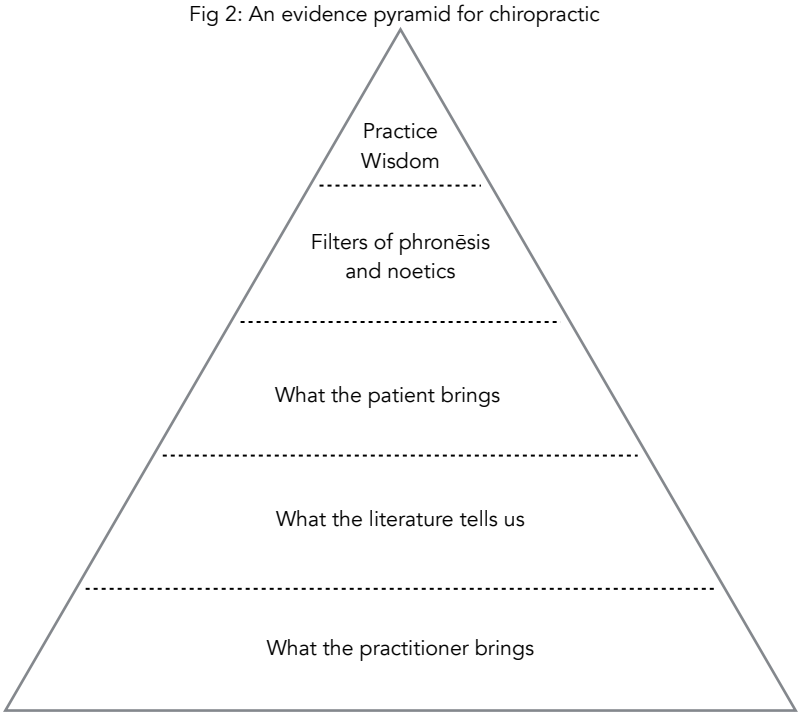
- the patient preferences, and
- their 'self-knowledge' with the immense pool of wisdom embedded in practitioner experience.

These qualitative matters are suited for appropriate investigation and documentation by methodologies outside the quantitative lens. This may explain the reason for the biomedicine industry and its commercial giants, the drug cartels, to strongly advocate the pyramid as the instrument against which projects are assessed for funding. Were the sums of money involved not so big this would be laughable, however given the billions involved there is no option than to confront it.

## A new Evidence Pyramid for Chiropractic

I present a new instrument (Figure 2) that avoids the ranking of evidence and admits the literature in all its forms at the practitioner's discretion. I collectively describe this information input as '*the literature*', a position that allows the most appropriate literature to be chosen to best match the individual patient being addressed. It is in this respect that I consider my approach to be '*more inclusive*', an invitation to broadly consider the literature across its gambit from case reports to meta-analyses.

Fig 2: An evidence pyramid for chiropractic



## Core concepts underpinning the Evidence Pyramid for Chiropractic

The new hierarchy given in this paper meets the test of suitability for use by all clinical practitioners regardless of their sect, from clinical medicine to Indigenous healing; it has two foundations.

The first is an understanding of a healing concept embedded in all traditional and Indigenous medicines and identified by Palmer as the founding basis of chiropractic, tone. (18) From McDowall (19) I understand 'tone' as critical to Palmer's origination of chiropractic and subluxation. Tone enters the new hierarchy at the levels of phronēsis and noetics and is the driving consideration of Practice Wisdom.

Tone is the expression of life and according to Palmer, '*Life is intelligent action*'. (20) This concept is applicable across all clinical disciplines and more so in those which build on the wisdom of the ancients and traditional learnings. The inclusion of the patient is mandatory for effective clinical decision-making in this paradigm.

The second is equally universal and while osteopathy tried to capture it with their recent work it points to a desired common destination, that of correctly identifying, interpreting and weighting evidence in the clinical environment. This is the evidence extant in the experienced practice of chiropractic, of which about a third may be seen in the chiropractic and broader medical literature in all fields, with the remaining two-thirds are found in the patient's self-identification and the clinician's practice wisdom.

## A consideration of 'evidence'

Just as evidence is weighted in law depending on the classification of the trial, evidence in biomedical sciences is weighted to reflect a scale of grading from weak or poor to stronger and strongest.

It is no coincidence that the evidence readily generated at little or no cost by conventional chiropractors is weighted poor or low; there is no 'business' for third parties because the detection and adjustment of subluxation is not a product which can be manufactured and sold for profit. The biomedical market is demand-driven by cabals which create a commercial need through advertising, an area in which regulatory bodies severely curtail chiropractors by creating an uneven playing field and constraining the provision of optimal health care to all people.

Sackett's founding principles deserve to be heeded, after all he is kindly considered the '*Father of EBM*' (21) notwithstanding that fact that EBM was first conceptualised in mid-19th century Paris. (22) Since Sackett's seminal paper in 1996 EBM has been adopted and included in most

18. Palmer DD. 'Founded on tone', frontispiece. Textbook of the science, art and philosophy of chiropractic. Oregon, Portland Printing Company. 1910.

19. McDowall DA. Daniel David Palmer's heritage and his legacy of tone to chiropractic [Doctoral thesis]. Southern Cross University. 2021. DOI https://doi.org/10.25918/thesis.121.

20. Palmer DD. The Chiropractor. Press of Beacon Light Printing Company, Los Angeles. 1914:22, 57.

21. Anderson JD. David Sackett D. 1934-2015: the father of evidence-based medicine [Obit]. Int J Prosthodontics. 2015;28(4):343-4.

22. Kwon SO. [Philosophical background of evidence-based medicine]. Uisahak. 2004 Dec;13(2):335-46. Korean. PMID: 15726761.

developed medical and health care curricula around the world (23, 24) but is critically seen by some as '*eminence based medicine*.' (25)

## The Case Report as evidence

I argue that the Case Report is the triangulation of the literature in all its forms, the patient in all their vagaries of presentations, and the practitioner in all their levels of experience within the context of a particular individual and their self-socio-cultural understanding.

It is from this step that the practitioner filters the collective evidence of patient, literature, and own experience, and reaches a clinical decision at the apex which is *Practice Wisdom*. (Figure 3)

I argue for the use of this new pyramid in the discipline of chiropractic.

My training is as a conventional chiropractor and I give the Case Report as the example of literature I consider strongly relevant to conventional practice. The quantitative lobby not only shuns case reports, they also abuse Sackett's Evidence Pyramid which is best suited to lab-based biomedicine, ignore its inclusion bias, and distort it further by excluding two vital elements of the evidence matrix first identified by Sackett; the patient and the practitioner, which is of course '*selection bias*'.

Yet the yearning for 'big science' places the Case Report at the lowest evidential level. This act covertly denigrates any documentation of chiropractic practice given as a Case Report. It also excludes the importance of Indigenous knowledge of healing. Australia's national broadcaster, the ABC reports '*Ngangkari healers were considered the treasure of Aboriginal communities, and now their 60,000-year-old tradition has made its way to South Australia's Royal Adelaide Hospital and rural clinics.*' (26)

Not only does the outdated pyramid exclude Indigenous healing it places the RCT at its Apex and it is now known that RCTs are generally bad science, (27) being open to fraudulent behaviour at many levels. Evidence of this is found in the number of once accepted papers that have been retracted due to misconduct (28) which is now more visible. (29)

These fundamental and fatal flaws affect chiropractic science in two ways:

- they exclude two-thirds of the available evidence relating to any clinical presentation, and
- they peak with a methodology appropriate to a reductionistic style of health care which by default excludes all practitioners of manual therapies and natural medicine.

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23. Ghosh AK. Clinical applications and update on evidence-based medicine. J Assoc Physicians India 2007;55:787–94.

24. Crowther H, Lippworth W, Kerridge I. EBM and Epistemological Imperialism: Narrowing the divide between evidence and illness. Blackwell Publishing 2011. https://ses.library.usyd.edu.au/handle/2123/11578.

25. Isaacs D, Fitzgerald D. Seven alternatives to evidence-based medicine. BM. 1999;319. DOI https://doi.org/10.1136/bmj.319.7225.1618

26. Sowaibah Hanifie. ABC News 'Ngangkari healers: 60,000 years of traditional Aboriginal methods make headway in medical clinics' accessed 7 Apr 2018 at http://www.abc.net.au/news/2018-03-28/aboriginal-healers-complementary-medicine-finds-its-place/9586972?pfmredir=sm&sf185680920=1

27. Labos C. It ain't necessarily so: Why so much of the medical literature is wrong. Medscape Sep 09 (2014).

28. Ferric C Fang, R Grant Steen, and Arturo Casadevall. Misconduct accounts for the majority of retracted scientific publications. proceedings of the National Academic of Sciences of the United States. 2012;109(42):17028-33 retrieved on 7 Apr 2018 from http://www.pnas.org/content/109/42/17028.short.

29. Hesselmann F, Graf V, Schmidt M, Reinhart M. The visibility of scientific misconduct: A review of the literature on retracted journal articles. Curr Sociol. 2017;65(6):814-45. DOI 10.1177/0011392116663807. Epub 2016 Oct 13. PMID: 28943647; PMCID: PMC5600261.

Those who blindly worship this older pyramid have missed these points and thus have a weak ground for their beliefs. Their position urges a rethink by every regulatory body basing sanctions against practitioners by using a process that is flawed by an inappropriate instrument.

## It is not just chiropractic

Chiropractic is not the only clinical discipline with an appreciation the original pyramid is flawed. Clinical medicine (Mayo Clinic) propose a new evidence pyramid (30) but the best they are able to do is propose the boundaries between levels of evidence be depicted as 'wavy' and that a new lens be used to view the resultant. This is akin to changing the packaging on a junk-food item and viewing it at different counters such as an airport kiosk and a shopping mall outlet; it may look nicer in the latter but the junk remains the same.

This has not deterred osteopathy. Figg-Latham and Rajendran (31) argued the '*Levels of Evidence Pyramid*' simply needs a lens they termed the '*Precedence of Osteopathy*' which does nothing but turn the pyramid upside down and weight '*expert opinion*' as the highest level of evidence in the '*Osteopathic Evidence Pyramid*.' Intellectual rigour is lacking in this view which reports the results of a small study of English osteopaths who believed their opinion was the most important evidence.

This is akin to chiropractors placing credence where it does not exist on the opinions of Breen, Byfield and Cunliffe. (6) Innes (32) perpetuated this naivety by what he self-describes as a '*rambling*', (9, p. 12) ineptly positing a likeness between osteopathy and chiropractic. I am unable to identify any logic or reasoning in that argument of Innes.

Nursing has come the closest to replacing the biomedical pyramid with their *'6SPyramid-7levelsCategories*' (33) in which the onus is placed on the practitioner to 'filter' and appraise the sources of evidence. This idea of 'filtering' is reinforced by Ingham-Broomfield, (34) citing Glover at al, (35) where critical appraisal and evidence synthesis produce the most reliable clinical evidence. I would argue that this is roughly equivalent to the apex of the new pyramid proposed in this paper (Figure 2), being '*Practice Wisdom*', with appreciation that the 'filtering' may not be formal nor published in many cases in daily practice.

Occupational Therapy proposed a new evidence-based practice model a decade ago. (36) Borgetto found the current single-hierarchy model of levels of evidence failed to incorporate at parity all types of research evidence that are valuable in the practice of occupational therapy. He and Tomlin developed a model which accounted for the basic modes of clinical reasoning in

30 Murad MH, Asi N, Alsawas M, Alahdab F. New evidence pyramid. ebm BMJ accessed 06 Apr 2018 at http://ebm.bmj.com/content/ebmed/early/2016/06/23/ebmed-2016-110401.full.pdf

31 Figg-Latham J, van Rajendran D. Quiet dissent: The attitudes, beliefs and behaviours of UK osteopaths who reject low back pain guidance e A qualitative study. Musculoskeletal Science and Practice 27 (2017): 95-105

32. Innes S. Occasionally something catches my eye. Newsletter of the Chiropractic and Osteopathic College of Australia 24 no. 1 (2018): 11, 2

33. Thompson CJ. 6SPyramid-7levelsCategories, Nursing Education Expert blog May 9 (2017) adapted from (C) DiCenso, Bayley, & Haynes, 2009, accessed 7 Apr 2018 at https://nursingeducationexpert.com/pre-appraised-evidence/6spyramid-7levelscategories/

34. Ingham-Broomfield JP R. A nurses' guide to the hierarchy of research designs and evidence. Aust J Adv Nurs. 2016;33(3):38-43. https://www.ajan.com.au/archive/Vol33/Issue3/5Broomfield.pdf

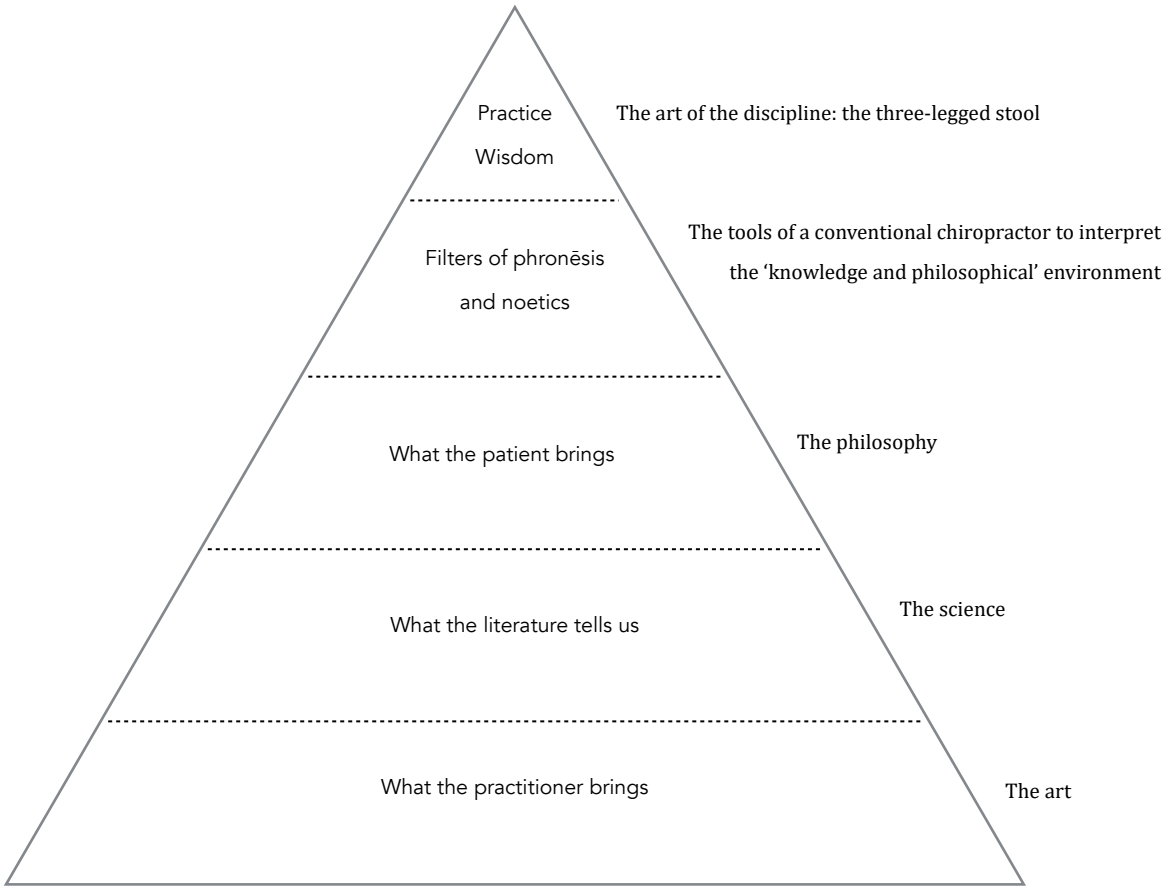
35. Glover, J., Izzo, D., Odato, K. and Wang, L. 2006. EBM Pyramid. Retrieved from http://www.ebmpyramid.org/images/pyramid.gif (accessed 11.12.15).

36. Tomlin G, Borgetto B. Research Pyramid: a new evidence-based practice model for occupational therapy. Am J Occup Ther. 2011 Mar-Apr;65(2):189-96. doi: 10.5014/ajot.2011.000828. PMID: 21476366.

occupational therapy. (13) In this proposed pyramid, the apex '*Practice Wisdom*' is roughly analogous to their range of modes of clinical thinking.

I present the new Evidence Pyramid for Chiropractic with notations (Figure 3) meant to resolve these conflicts:

Fig 3: An evidence pyramid for chiropractic with notations




## Lack of bias in the new Evidence Pyramid

There is no inclusion or exclusion bias found in the new pyramid. All clinical disciplines enter at the same common level of '*what the practitioner brings*.' This places a value on the knowledge held in the mind of each practitioner and is also the entry point for one's philosophical stance. It is at this level that clinical learning begins for students of the discipline.

All *literature* enters at a common level with no artificial distinction between a well-written case report and, for example, an RCT. Opinions, so evident among chiropractic's Academic Elites are excluded unless they are opinions based on evidence and the evidence is available for individual assessment. The literature is considered through both discipline- and topic-related filters of relevance to the practitioner.

Next, consideration is given to '*what the patient brings.*' This is built on the practitioner's experience which may or may not encompass past management of a similar presenting complaint, and an information base built from literature appropriate to the patient.

The understanding gained from these three significant elements is filtered by the practitioner using the philosophical tools of *phronēsis* (in the Aristotelian sense of practical wisdom, an

intuition based on knowledge to determine good courses of action) and *noetics* (in the original Greek sense of inner wisdom and subjective understanding).

The apex of the pyramid is the philosophical concept of '*practice wisdom*' applicable to clinicians and reached through the philosophical filters of *phronēsis* and *noetics*. Thus the highest level of 'evidence' in 21st Century chiropractic practice is a reversion to the wisdom of the ancients, the cumulative tribal knowledge of healing contemporised by on-line utilisation of immense data-bases of evidence in every shape and form.

## Conclusion

A new Evidence Pyramid for Chiropractic is presented and shown to be applicable in the broad sense to all clinical practitioners regardless of discipline. With specific regard to chiropractic I contend it forms a foundation on which a 21st Century philosophy can be built. An early attempt is given by illustrating the interpretation of the classic chiropractic concept of the three-legged stool of the profession; its science, art and philosophy.

I argue that:

- the chiropractor brings the essential *art* as a capable base of clinical chiropractic skills including the ability to adjust as determined by meeting known technical parameters;
- the literature brings a broad scope of evidence allowing the practitioner to filter from Case Studies toMeta-Analyses as the *science*, and
- it is the patient who brings the *philosophy*, their innate understanding of their own health and the role that chiropractic allows for it to be optimally expressed (Figure 3).

This is the embodiment of Jamison's '*locus of care*'. (37)

Of particular interest is to discover a means of advancing the Evidence Pyramid for Chiropractic by demonstrating how it could be applied to greatly enhance the actual practice of chiropractic. Work must now be done by many to test this pyramid to identify its weaknesses and propose ways to strengthen it.

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*Disclaimer*

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