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# Advances in Integrative Medicine

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“There is no such thing as alternative medicine, only medicine that works and medicine that doesn’t” . . . actually, it is a little more complicated than that: the translation gap in complementary and integrative medicine



One of the criticisms of the field of complementary medicine (CM) (and by default, integrative medicine), is that CM is a nonsensical definition. If any CM was truly effective, critics say, it would simply become part of mainstream – or “scientific” – medicine. Any CM that has not been absorbed by conventional medicine is considered – by this definition – a treatment that must not work. Such criticisms of CM have led in turn to criticism of the field of integrative medicine – which combines the best of complementary and conventional approaches to health – as integrating “fantasy with reality” or “pseudoscience with science”. One published criticism has gone as far to compare the combination rather unfairly to mixing cow pie with apple pie (noting that the mix does not make the pie better, but worse) [1].

This argument developed as a corollary to the evidence-based medicine movement, which formalised in the 1990s. However, it is now so commonly applied that its originator cannot be accurately identified. One of the earliest prominent versions of this argument can be found in an editorial published in the *New England Journal of Medicine*, which stated “It is time for the scientific community to stop giving alternative medicine a free ride. There cannot be two kinds of medicine – conventional and alternative. There is only medicine that has been adequately tested and medicine that has not, medicine that works and medicine that may or may not work. Once a treatment has been tested rigorously, it no longer matters whether it was considered alternative at the outset. If it is found to be reasonably safe and effective, it will be accepted” [2].

Such sentiments are noble, if a little simplistic. In a black and white world they would even make sense – few people would argue that we should continue to use ineffective treatments or that conventional medical practitioners should not take up effective treatments as soon as their effectiveness has been uncovered. However, as with most things in life the reality is much messier than such simplistic aphorisms would suggest. Firstly, only rarely do clinicians make decisions based solely on scientific evidence. Not only does true evidence-based medicine require patient preferences and clinical experience to be incorporated, but studies consistently demonstrate that individual and institutional cognitive biases in conventional medical practice lead to inappropriate overuse of known ineffective treatments, over-diagnosis, and reduced uptake of evidence-based treatments [3]. Despite many

years of focused attention on translation of research into practice, there remains a significant evidence gap between evidence and practice in health care [4]. This problem is so pervasive that an entire scholarly field – implementation science – has developed to assist promotion of the results of research and evidence into health care policy and practice [5]. Increasingly the nascent field of implementation science is also casting its attention to the field of CM, to ensure safe and effective clinical decision-making in CM, which includes implementation and integration of CM where appropriate, as well as de-implementation as necessary [6].

Such systemic issues are often compounded by the complex social, cultural and political relationship conventional medicine has with CM, and the many ideological and political tensions between the two fields [7], which can result in development of further knowledge and translation gaps. Those same cognitive biases can create opposition to CM even when the evidence demonstrates they work. For example, when a large randomised-controlled trial that showed significant benefit for cardiovascular patients from routine naturopathic care was published in the Canadian medical profession’s pre-eminent peer-reviewed journal, the editors commissioned an accompanying editorial that advised medical practitioners to not be guided by such evidence, and to instead exercise caution in working with naturopaths [8]. Similarly, when presented with conventional or CM options of similar clinical value – or even where CM has a better clinical and safety profile – evidence suggests that conventional medical practitioners will still choose the conventional option. Multi-year European prescribing data shows that pharmaceutical antidepressants are still preferred in medical prescribing over the herbal medicine *Hypericum perforatum* for mild-to-moderate depression, despite the latter often having a more beneficial safety and efficacy profile [9]. A survey of Australian medical practitioners highlighted that medical practitioners would prefer to refer to a medical practitioner for CM services, even when the referrer explicitly knew the medical practitioner was less knowledgeable and less proficient at that CM than a non-medical CM practitioner [10]. The reality is if “evidence they work” were all that was needed, there would be a lot more CM available in most health care systems, and far less of many conventional medical treatments.

One of the factors that makes delivery of good medical care even more difficult is the involvement of the patient themselves.

Patients are also guided by multiple factors beyond evidence when making treatment decisions. CM decision-making by pharmacy users has suggested the factors around patient decision-making in using CM are complex and multifactorial, with evidence only one of many factors considered when seeking CM for self-care [11]. Patient decision-making in CM is not just centred on research evidence, but also dissatisfaction with or concerns about conventional treatment, alignment with personal beliefs, and attraction to holistic forms of health care or the patient-centred nature of many CM [12]. The most influential factor in patient choosing to continue their CM use, however, is the patient's own personal experience of using CM, and whether it works for them personally (or has worked for those they know) [13]. Though it would appear to suggest a rather cavalier attitude to being evidence-informed on CM issues, international research suggests that clinicians recommend ineffective treatments at least as often as patients who make their own treatment decisions [14].

This is not only suggestive of a research and knowledge translation gap, but – as has been explored in previous editorials – that perhaps that research assessing CM may not be accurately reflecting the effectiveness of CM from a patient-centred perspective [15]. This critique is by no means unique to CM, it is increasingly recognised as being problematic for healthcare more generally [16]. Part of the problem therefore may not so much be the translation of the evidence, but the evidence that we are attempting to translate. The solution to this problem is not to give up on scientific rigour or scientific inquiry – into CM or any other field – but rather to ensure that any research attention to health treatments is appropriate and accurately captures the complexities of patient priorities and practices as they are delivered in the real world. Another part of the solution is to embrace the grey and avoid ridiculous blanket black and white statements such as “there is no such thing as CM”. CM is a heterogeneous field, and its complex definition embracing both evidence-based and fringe therapies undoubtedly creates some research, practice and implementation difficulties [17]. However, a more critical approach to implementing what does work in CM and de-implementing what does not is essential to ensuring safe and effective patient care. *Advances* is ready to take up this challenge and do what it can to help improve the translation of evidence into practice. Part of this requires a two-way dialogue between clinicians and researchers. If you are a clinician, as you peruse this (and every other) issue, please consider contributing a clinical perspective to *Advances*, we exist to

facilitate better integrative clinical care. Who better to help us in this goal than the clinicians themselves?

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