



TIMOTHY Caulfield

THE CURE

Integrating nonsense?

Integrative health clinics and programs seem to be popping up everywhere. An approach to patient care billed as offering a mix of mainstream medical therapy with alternative approaches, integrative health has emerged in a climate of growing patient unhappiness with the conventional medical system and at a time of increasing popularity of alternative treatments. As such, it seems a logical response to a social phenomenon in which we demand answers and cures to what ails us when mainstream medicine appears wanting.

The demand is being met. There are a rising number of integrative health clinics that offer what is promoted as team-driven medicine, drawing practitioners from fields such as naturopathy, Chinese medicine, massage therapy and chiropractic. Meanwhile more and more Canadian universities are embracing the concept: Calgary's Mount Royal University has an Integrative Health Institute. The University of Saskatchewan has the Centre for Integrative Medicine. And the University of Alberta has the Program for Integrative Health and Healing.

I have no problem with the investigation of the effectiveness and dangers of alternative therapies, so long as that investigation is built upon sound methods. It makes sense to look for potentially helpful therapies wherever they may be found. In the US, for example, the National Institutes of Health established the much-criticized National Center for Complementary and Alternative Medicine (NCCAM) — an entity that has spend billions researching everything from therapeutic touch to acupuncture.

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But the integrative health wave shows both irrational and dangerous tendencies. In particular, it is a serious mistake for science-based institutions — such as a publicly funded university — to embrace the idea of integrative health, at least as it is now understood. As we have seen with the recent drop in vaccination rates, the increasing consumption of supplements and the broad promotion of absurd theories of health (I'm thinking of people like you, Dr. Oz), there are reasons to be concerned about the rise and consequences of the pseudoscientific.

A recent US survey published in *JAMA Internal Medicine* found that more than half of the general public believe, or are not sure about, a range of ridiculous and dangerous health conspiracy theories, including the ludicrous idea that the government is withholding natural cures for cancer and that physicians and the government know vaccination causes autism (to be clear, it does not). The uncritical approach necessary for the existence of university-based integrative health care programs helps create an environment where these disheartening beliefs can flourish unchallenged.

Integrative health programs and clinics involve the explicit and uncritical embrace of unproven therapies and practices built on entirely pseudoscientific or semispiritual foundations. As summarized on the website for Mount Royal University's institute: "Integrative Health means the integration of conventional, complementary and alternative health care options to address wellness, health promotion and the healing process."

As a result, integrative health requires incorporating — either implicitly or explicitly — completely unscientific and intellectually regressive concepts like ch'i (the magical energy force flowing through our bodies that is most often associated with acupuncture), vitalism (another magical life-giving energy force central to the philosophy of naturopathic medicine), homeopathy (the ridiculous and physically impossible idea that water holds the memory of nonexistent and healing molecules) and the disease-causing properties of vertebral subluxation (the belief that a host of health problems are caused by irregularities in the position of the bones of the spine).

That is not the core of a science-based research agenda that involves the exploration of the effectiveness of alternative therapies.

Despite thousands of clinical trials on things like homeopathy, acupuncture and spinal manipulation therapy, very few "integrative" approaches have a solid evidence base. Even when a benefit has been found, the effect size is almost always relatively small. If this stuff worked well, we would have the clinical evidence to show for it. As a May 17, 2009, *Washington Post* article critical of the NCCAM noted, the best studies suggest that most alternative medicine is little more than the "placebo effect dressed up in a dozen different costumes."

Still, research on alternative approaches seems warranted, if only because of their profound popularity. It

is estimated that approximately 40 percent of all cancer patients use some kind of alternative therapy. It is crucial to study what it provides that the public does not see in mainstream medicine. And we need to understand its impact on the conventional health care system.

But because an integrative health approach demands tolerance of therapies of questionable clinical value and scientific validity, it seems likely to inhibit dispassionate research into the implications and effectiveness of alternative therapies.

Integrative medicine also raises a host of profound legal issues. The standard of care that governs the practice of physicians — in relation to either the provision of treatment options or the informed consent process — is largely governed by science. Indeed, professional guidelines require physicians to consider the best available evidence of any therapy before prescribing it. But physicians working in an "integrative" clinic will almost certainly be surrounded by practices and practitioners governed by pseudoscience. And these clinics will no doubt attract patients who expect referrals to alternative practitioners.

Will the law allow physicians to switch between a science-based approach for the conventional therapies and a pseudoscientific approach for the use of and referral to their "integrated" alternative colleagues? The short answer: no.

Furthermore, the promotion of integrative health care seems to be eroding essential critical thinking, helping to legitimize clearly unscientific practices and beliefs, be they about the value of homeopathic vaccines or spinal manipulation therapy for serious ailments, or the alleged benefits of expensive and useless supplements. If a university has a program that "integrates" these practices — the thinking might go — then they must be scientifically legit.

I appreciate that many of the academics working with integrative health programs will disagree with my harsh assessment. They will point to the research being done on the effectiveness and safety of various alternative therapies. And this is great work. The problem is that these centres and institutes must, for their existence, accept — and, as a result, help to legitimize — their pseudoscience-based colleagues.

If I am wrong and science is not the standard by which universities should judge their science-based programs, why should universities stop at integrative health? Why not develop an integrative physics program that has renowned physicists working closely with astrologers and experts in the ways of ancient Chinese astronomy? There could also be an integrative engineering program that teaches students how to build bridges and fix passenger jets using the healing powers of nature.

We should punt the concept of integrative medicine from Canadian universities. We must accept that science sets the standard, and science is not about uncritical integration. It is about the rigorous and dispassionate search for the truth. ■



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