

# Integrated Medicine – A Way to Bring Creativity Back to Medicine?

## Introduction

I shall start by asking some questions. As I do so, I am reminded of the great philosopher, Isaiah Berlin, who said “never ask a question to which you know the answer”.

I shall simply ask my questions, and at the end I shall come back to them and explore their relevance to the new Society which we are inaugurating today.

**Firstly, why do some many people spend their money on complementary and alternative medicine (CAM)?**

This isn't public money, its all of us spending our taxed money on treatments that we must find helpful. The amount of spending is huge, £1.6 billion as estimated by a BBC Survey carried out in 1998. By comparison, the annual NHS budget is £50 billion. In the USA studies suggest there has been 47.3% increase over a 5 year period in visits to complementary practitioners with out of pocket expenditure estimated at \$27 billion in 1997 (Eisenberg DM, Davis RB, Ettner SL et al, Trends in Alternative Medicine in the United States, in 1990 – 1997: Results of the Follow Up National Survey. General of the American Association, 280,1569-75 1998).

**Why do we do it?**

It isn't a case of primitive people indulging in Voodoo, but many within orthodox medicine would think it is. The people who opt to spend this kind of money are in the earning part of society, and also in the educated part. So, what is their motivation? I shall leave this question for the moment.

**Why is there a yawning gap between the evidence base of CAM, and the extent of its use by an increasing number of the populous?**

*Why do so many randomised controlled studies of various CAM disciplines turn in negative results?*

The centre of my argument is both an idea and a person, and I am going to talk about Dr David Horrobin. I am nothing more than a country doctor who likes to think, perhaps too much for my own good. However, I could not say that of David Horrobin, he was a leading medical researcher of our time, who sadly died in April of this year. He published some 800 research papers. What did Horrobin think about the current state of medical research? Do they get a clean bill of health from them?

In Horrobin's own words, published in February this year "we have" he wrote "an almost wholly reductionist medical community". He goes on to say that the bio-medical community "repeatedly makes exaggerated claims about how it is going to revolutionise medical treatment, in which it repeatedly fails to achieve anything".

So my keyword is reductionism.

**My third and final question is, what is the most challenging aspect of complementary medicine?**

## **Medical Attitudes to CAM**

The Medical Profession is divided as to whether the accelerating trend towards CAM is positive or negative trend. Those who regard it as negative consider that much of complementary medicine is connected with superstition and empiricism, and that modern medicine has been moving away from this for the past hundred years in the

direction of rationality and evidence. Some would argue that the increasing popularity of CAM is a return to pre-scientific views and long abandoned healing traditions. They would interpret the continued rise of CAM as being due to a loss of nerve of modern medicine. They see this as due to a crisis of confidence in scientific medicine, and a wider crisis of authority in society and popular disillusion of scientific expertise in general. The loss of nerve in modern medicine is described in a masterful fashion in James LeFanu's book 'The Rise and Fall of Modern Medicine', (Abacus, 1999).

## **Complementary Medicine**

Complementary Medicine is characterised by a wide range of opinion and practice, ranging from practitioners who are almost obsessively devoted to the idea that complementary and alternative medicine should replace orthodox medicine, and see orthodox medicine as being bad, harmful, full of risk and only focusing on treating patient's symptoms. At the other end of the spectrum, are physicians who are trained in a range of complementary medical disciplines, who use these in an eclectic fashion and attempt to integrate these in the best possible way with orthodox approaches, to the perceived best benefit of the patient. It is this movement that we are principally concerned with in our fledgling society, the British Society of Integrated Medicine.

The time of the doctor/complementary physician solely using one therapy, such as being a homeopath, an acupuncturist or whatever, is now beginning to slowly disappear. Largely, through increasing understanding of the limitations of what each therapy can offer and some knowledge of the alternatives that exist to their particular therapy. In that sense, much of complementary medicine is not holistic, but has regularly made the claim over many years that it is, with little evidence base to back this claim.

This is reflected in a practical sense, in relationship to the lack of success, of a whole range of initiatives which have encouraged complementary practitioners, and doctors practising single complementary therapies such as homeopaths to be more willing to refer their patient to another practitioner who might be able to help a patient better than they can, rather than for example, in homeopathy, eternally searching for the simillimum. The trend of doctors to become multi disciplinary is a welcome and practical move away from this therapy dominated CAM culture.

A group of patients has grown up, with doctrinaire attitudes towards complementary medicine, and in extreme cases, resolutely refusing to have anything to do with conventional medicine. This was brought home to me some few years ago when I read of a diabetic child, whose parents refused to let the child have insulin, and insisted that the child should be treated by 'natural' methods. Not surprisingly the child died. These type of patients are given short shrift by conventional doctors and doctors with an integrated approach certainly find them challenging.

Complementary and alternative medicine has found it difficult to respond to the current scientific climate in medicine. Partly in my view, due to the fact that most of the disciplines within complementary medicine are traditional disciplines such as traditional Chinese medicine, Ayurvedic medicine and homeopathy. Inevitably, if a system is traditional it is also relatively static and unchanging. From a scientific point of view this is a weakness, although supporters of these systems of medicine generally make a virtue of the fixed nature of the ideas underpinning these disciplines. In many instances this can verge on a religiose attitude, most commonly in relation to homoeopathy. Some make wild claims that homeopathy will enable its recipients to reach a state of continuous and unconditional happiness! (G Vithoulkas, The Science of Homeopathy 1980).

## **Research in Complementary and Alternative Medicine**

Conventional medical research defines randomised controlled trials as the gold standard. In these trials patients are randomised either to a treatment group or to a placebo group. The results of these studies are considered to be the peak of academic excellence. Criticism of this holy cow is rarely tolerated and can brand the author of the critique as a medical heretic.

Within the field of complementary medicine research, it has to be said, that the results of randomised control studies are often negative and do not support the extent of use of complementary therapies by the general population in increasing numbers throughout the world. Indeed the disparity is a yawning gap. In my view there must be some reason as to why this is the case.

I venture to suggest that the use of randomised controlled studies is not an effective way of assessing the efficacy of a whole range of complementary medicine disciplines. In my view, the use of non-randomised matched cohort studies, and this is essentially an observational outcome study design, is the most viable option. What this means is taking a group of patients with any particular condition, so that the choice of patients for the study is not randomised. The total group of patients being studied is known as a cohort, and the matching is against a similar group matched in relationship to type of disease, severity of disease, age and sex. This group would not be receiving the treatment being studied, and in cancer, could come from comprehensive databases which are available with this information. The problems with these kinds of studies, is that practically all the main stream journals will not publish them, so one has to be content with publication in less important journals.

In a matched cohort study, the goal is to identify a control group of patients similar in all relevant ways to the study or intervention group. Matching of cases is undertaken on factors such as age and severity of disease, or problem at the base line, plus any other factors thought to be influenced on the outcome. Done well these studies can provide valuable information about the relative effectiveness of various

interventions. However, the problem is that it may be hard to match for all factors. Any unaccounted for factors, due to ignorance of the mechanism of action of any particular intervention, if for example, they remain differentially distributed in the compared groups, they may create systematic differences in the outcomes. This means that there is increased uncertainty about whether the results are due to the treatment or to the uneven distribution of the unmatched characteristics. This problem may reduce, if these unknown factors are randomly distributed, if the group sizes are sufficiently large.

One well known study which was just such a study, as described, was the study on the survival of patients with breast cancer attending the Bristol Cancer Help Centre (Bagenal et al, 1990, Survival of Patients with Breast Cancer Attending the Bristol Cancer Help Centre. *Lancet* 336:606-10).

This study became well known because of the negative conclusions regarding the impact of the Bristol Cancer Help Centre attendance and received a great deal of media attention. Essentially this showed that the patients attending the Bristol Cancer Help Centre fared significantly worse than those who did not. The matching however, between those who attended the Bristol Cancer Help Centre and the controls, was shown to be defective and as a result the authors, following a public debate about the study design, formally withdrew the main conclusions from the study. This resulted in a tragic outcome for one of the authors. In my own integrated medicine practice, we now have a peer reviewed study protocol for an observational outcome study of our cancer patients over a three year period. One of our peer reviewers, a well known professor of oncology, pointed out that in order to find matched controls in a similar study which he had conducted, took him over two years. So, this is a major area of possible fault with these kind of studies.

Reductionism does have its place, and being able to reduce a condition down to a particular bio-chemical disorder and then correct that, can lead to the cure of that disorder. This approach has worked admirably in a whole range of medical conditions.

Obvious examples of this would be the use of insulin in type 1 diabetes, or the use of antibiotics in bacterial infections. On the other side of the coin, complex common debilitating conditions such as Chronic Fatigue Syndrome to name but one, tend not to respond to single hit approaches. So, all is well and good for simple conditions, but not for complex conditions which form the majority of illnesses for which patients consulting complementary therapists and integrated medicine doctors comprise.

## **Large Clinical Trials in Rapidly Lethal Diseases**

This is an area that particularly interests me, as treatment of cancer, mostly in its late stages, is an important part of our clinical practice. In this section I wish to draw extensively on David Horrobin's paper 'Are Large Clinical Trials in Rapidly Lethal Diseases Usually Unethical?' (Lancet 2003; 361: 695-97). This section will also talk about the use of integrated approaches in cancer.

There is much prejudice and ignorance surrounding the use of complementary approaches in cancer. Many of these approaches are under researched, but in many cases there is some degree of research backing published in peer reviewed journals and these approaches have produced encouraging results in a range of cancer patients. We see many cancer patients and because our evidence base is limited compared to conventional approaches to cancer, we mostly see stage 4 cancers as the current evidence base strongly supports conventional approaches at earlier stages of cancer. This is why our treatments are only available on an informed consent basis. Occasionally patients at an earlier stage of the disease process come to see us. Because there is a strong evidence base for conventional treatment strategies, this does not mean that other treatment might not also work just as well. Amongst the group who come to see us at an earlier stage of the disease process, are doctors, which is indeed curious, but an interesting fact. Oddly enough, they wish to remain incognito so far as their conventional colleagues are concerned.

David Horrobin died from mantle cell lymphoma in April 2003, in his sixty-third year. He was a great loss to medicine and had a wonderfully creative mind. He was a prestigious medical researcher who has written over 800 papers over the past forty years. Some two years ago he was diagnosed as having advanced mantle cell lymphoma and was given a prognosis of six months. In his own words, he suddenly found himself on the other side of the divide, no longer a doctor, but a patient. He started to look at clinical trials in a completely different way. His change in mind set parallels the change in mind set in the doctors who come to consult us with cancer, who themselves have had extensive experience in treating cancers of their patients. Horrobin devised his own non-toxic treatment of his lymphoma and in the end survived nearly two years (A low toxicity maintenance regime, using eicosapentaenoic acid and readily available drugs, for mantle cell lymphoma and other malignancies with excess cyclin D1 levels, by Horrobin D in *medical hypotheses* 2003 60(5)615-623.)

Horrobin extensively reviewed the literature on the treatment of cancer. He says the following:

*'To my dismay, I soon learnt that in oncology, with few exceptions, effect sizes were very small. To show these effects, trials had to be very large. I also learned from my fellow patients that the real consequences of this situation were rarely spelt out to those volunteering for such trials, in terms they could understand. I thought long and hard about this situation and came to the conclusion that, as presently organised, many oncology trials are unethical. Similar considerations apply to any other rapidly lethal disease.'*

Horrobin then went on to point out that the reason why most patients with a rapidly lethal disease volunteered for a clinical trial, is through altruism, and pointed out that actually, what these patients want to do is survive and have some hope. He also pointed out that all the clinical trials open to them, involved the use of significantly toxic substances or procedures which are likely to do the vast majority

of patients involved in such trials, more harm than good. He points out that the reason these clinical trials are large, say more than 100 patients, is that the expected effect size is very small. This therefore means that most patients entering such trials have little or no chance of receiving benefit and have a high chance of harm. He goes on to point out that such large multi centred trials are very costly and can only be done on patent protected new chemical entities or chemical entities which have the minimum of 15 years of patent protection left. Therefore he argues that these approaches are financially driven by large companies who have sufficient financial muscle in order to fund them.

Horrobin then goes on to say the following:

*'Any scientifically or medically qualified person who develops a lethal cancer rapidly learns many things. Two of them were especially surprising to me. First, as in my own case, the usual effects of standard treatments were all-to-often both toxic and of minimum therapeutic value. Occasionally patients do very well, but the outlook for most is gloomy. Moreover, the evidence base is near useless as a guide to what is likely to happen in one's own case, partly because the exclusion and inclusion criteria for trials are often so narrowly drawn that most individuals are unlikely to fit them. Another contributing factor is that effect sizes are so small that the numbers needed-to-treat to get one durable response may well be over thirty and often even higher. So, for the individual, treatment is indeed a lottery. In view of the frequently severe adverse events, usually much more predictable and reliable in their occurrence than is a therapeutic response, a decision on the patient's part not to be treated is not irrational. I learned that few patients are made aware of this fact: that is unethical.*

*The second surprising thing that I learned is that, for most cancers, there are many potential treatments, many of which are not toxic. Contrary to general orthodox medical opinion, most such potential treatments are neither fringe nor irrational. They are based on solid biochemical in-vitro work, on reliable work in animals and*

*occasionally on a few well documented case histories. But they have not been adequately tested in well designed trials, and most of them never will be. The reason for that has nothing to do with their scientific rationale or the strength of the evidence. It is simply that they are unpatentable or difficult to patent. Without patent protection, in the present climate, such potential remedies will never be tested.'*

Therefore the informed patient, if their chances are 20 per cent or less, which is most often the case in late stage recurrent cancers, they look for alternatives which do not carry the downside of toxicity, if they produce a positive effect that is a bonus, but at least they do not have a downside. Generally speaking the majority of oncologists are unsympathetic to these approaches especially in the UK, but are more open in America. They say that these approaches are unproven, but it is clear to me that if they were on the other side of the divide like David Horrobin was, then they might think differently.

In my opinion, it is highly likely that many of these approaches we use which are unpatentable, such as the use of high dose intravenous vitamin C, might well produce similar clinical results if trialled in large enough trials as standard chemotherapy is and is continually trialled in this way. The research evidence therefore for conventional approaches, is of high quality, because it is driven by a well financed machine, with good international communication, and there is a continuous research process going on entirely focused on these patentable treatment approaches.

## **Current Research Directions**

I wish to draw on another article written by David Horrobin (Not in the Genes, Enthusiasts for genomics have corrupted scientific endeavour and undermined hopes of medical progress, in comment and analysis, the Guardian 12 February 2003, page 20.) He pointed out in this thought provoking article that triumphalism about

molecular biology, genomics and the human genome is an increasingly pervasive theme in biomedical science. You may care to note in what follows as to how often he uses the word reductionist:

*I quote: 'starting in the 1960's, molecular biologists and genomic specialists took over biomedical science. Everything was to be understood completely at the molecular genomic level. Everything was to be reduced to the genome. Journals and grant giving bodies came to be dominated by reductionists who were scathing about the complexity of whole organ, whole animal and especially whole human studies which were seen as too full of uncontrolled variability to be interpretable. Clinical and physiological studies lost out and progressively their research communities were destroyed. Now we have an almost wholly reductionist biomedical community which repeatedly makes exaggerated claims about how it is going to revolutionise medical treatment, and which repeatedly fails to achieve anything'.*

He then goes on to talk about cancer and makes the following comment:

*'We have made dramatic progress in a very limited range of rare cancers: the leukaemias, lymphomas and testicular tumours. But even then many of the drugs used were introduced before 1965. We have simply learnt to use them better. The idea that genomics is going to make a major contribution to human health in the near future is laughable, but the tragedy is that whole organism biologists and clinicians who might have helped unravel the complexities are almost all gone, destroyed by the reductionists'.*

These observations are of major importance to integrated medicine, and to the systems approaches deployed by many forward thinking integrated doctors (see later).

For my own part, I do not deny the importance of genes. I am fascinated by the fact that we share half our genes with bananas, something which is more apparent to me in some of my colleagues as opposed to others!

Peer review is what drives the clinical trial and publication process in its currently largely reductionist framework. The process of having your paper published, is governed by a process known as peer review. What this amounts to is your colleagues and often, if you are in a particular field, these colleagues may be close friends of yours, looking at your paper in an anonymous way, and making appropriate comments which govern whether the paper will be published or not, as the editor is bound to be highly influenced by the opinions of the peer reviewers. Often specialised fields in medicine and indeed all of the sciences are relatively small and the peer reviewer will almost certainly know who has written the paper, even though the paper is sent to them anonymously. The stifling effects of the system of peer review has been pointed out by a range of influential medical thinkers, particularly David Horrobin, and he originated the thesis that clinical research has declined in its ability to generate major break throughs, largely in his view due to the stifling effects of peer review. A recent piece in the British Medical Journal (Little evidence for effectiveness of scientific peer review, BMJ Vol 326, 1 February 2003, page 241) stated that the international Cochrane collaboration, which is the gold standard of collation of medical research material, says that there is little hard evidence that peer review improves the quality of published medical research. It goes on to say the system has been in use for at least 200 years and has only recently come under scrutiny with its assumptions about fairness and objectivity.

The Cochrane collaboration concluded that on the basis of current evidence, the practice of peer review is based on faith rather than on facts. They went on to say that not only do peer reviews pander to egos and give researchers licence to knife each other in the back with impunity and anonymously, but it is also completely useless at detecting research fraud and lets editors off the hook for publishing poor quality studies.

## Challenges to the Randomised Control Trial Format

I have watched with great interest over many years, the work of Professor William Tiller and his group in California. Professor Tiller looked at simple electronic devices which he called intention imprinted electrical devices. These devices were 'imprinted' by imprinters who were trained in meditative techniques. In practice this involves the imprinter, who is chosen as somebody used to spiritual practice, particularly in the meditative area. He or she holds the device in their hands, and focuses on specific intents in their mind, attempting to imprint this intent on the electrical device. In practice, this only takes a short period of time, 20 minutes to half an hour. He describes this as a unique human consciousness induced processing procedure. Intention printed devices and unimprinted devices were studied extensively over a three year period. The target materials selected for these studies were:

1. Water
2. Liver enzyme – alkaline phosphatase
3. The main cell energy storage molecule ATP
4. Living fruit fly larvae

The imprinted devices produced robust and repeatable effects on all of these systems which was highly statistically significant ( $P < 0.001$ ), this is indeed an extraordinary result (New experimental data revealing an unexpected dimension to material science and engineering. William A Tiller and Walter E Dibble, *Mat Res Innovat* (2001:5:21-34). Also (Towards general experimentation and discovery in 'conditioned' laboratory spaces Part 1: Experimental pH-change findings at some remote sites by W A Tiller et al. 2003 (in press), original copy available from the author, also; Towards general experimentation and discovery in conditioned laboratory spaces. Part 2: pH-change experience and 4 remote sites one year later, W A Tiller et al. 2003, in press, original manuscript available from the author).

These papers showed a remarkable entanglement process occurring between the treatment devices and the placebo, and this occurred over vast distances between the sites, in some instances 2000 miles. This new data shows that human consciousness, at least under some conditions can strongly influence well designed target experiments and physical reality. This entanglement is a classical type of entanglement between laboratories of large or small size. This implies that double blind studies will not work and that that placebo and treatment in a medical experiment are mathematically connected in a precise way. This kind of entanglement, seems to be most marked in any therapeutic discipline which involves subtle energies, which a large percentage of complementary and alternative medicine uses. In my view this work, which has been impeccably conducted to the highest scientific standards, is of huge importance. The degree of 'conditioning' of laboratory space seems to depend on four main factors as elucidated by Professor Tiller, these are:

- a) History of the local space and objects of the local space;
- b) Intention imprint and charge from any intention imprinted electrical device;
- c) The consciousness and biofield of experimenters or of the people occupying laboratory space;
- d) The level of potentiation of the measurement equipment in the space.

All of these factors are central to the way complementary therapists view their practices and also is what makes them so different from the way conventional doctors operate their kind of practice. I would hope that in some quarter this kind of work may be taken seriously.

Professor Tiller's work seriously challenges the randomised control trial gold standard when applied to any complementary medical discipline which involves, in any way, concepts of subtle energy.

## Vitalism and Subtle Energy

Complementary and alternative medicine is full of ideas about 'energy'. This is really a modern way of talking about life force, and was taken seriously by some scientists as recently as the 20<sup>th</sup> century but not since. Its origins are probably pre-historic, and it was generally held to be some kind of subtle substance or force which exists which is responsible for life. Its principle is often identified with the breath, because clearly when we are dead we stop breathing. There are various words which describe subtle energy, for example the Sanskrit word *prana*, in traditional Chinese medicine the concept of *chi*, in acupuncture the meridians are supposed to carry *chi* flowing around the meridians in a particular sequence. Illness is thought to occur when blockage occurs in the flow of *chi*, and from the point of view of acupuncture, needling around the areas which might influence this block, will allow the *chi* to flow again. Samuel Hahnemann enshrined this notion of subtle energy and homeopathy in the process of 'dynamization'. He implied that there was some kind of vital force in the non-material homeopathic remedy.

A whole range of therapeutic systems in CAM use in various ways, this idea of energy. Electrodermal testing is to some extent a way of measuring this energy, and is the area which interests me most within all of CAM. This involves placing medications to be tested in electrical circuits with a patient to determine what is the best choice of treatment. The science behind subtle energy, in my view is the biggest challenge to the biomedical model which CAM presents. The biomedical model with its increasingly rigid structures, such as the ubiquitous use of RCT's, is ever more hostile to these ideas. Whilst on the opposite side, from the complementary medicine practitioners, detailed questions about the nature and function of this subtle energy produces totally confused ideas with little of it backed by experiment. There is no general agreement as to how it works and there is seldom any serious attempt to describe any scientific backing to these energies. There have been a number of attempts to update the concepts by reference to contemporary physics, and these have been

successful in probably three groups worldwide. Conventional medical colleagues brush this off as *pseudo science*. This is often in my experience a situation where the accuser has not looked at the science and does not anyway have any of the basic scientific background in physics and maths in order to understand it. There is an almost existential terror amongst conventional doctors when confronted by these ideas and that in my view is what is so interesting about them, because they potentially open up a huge new world of understanding of the way living systems work.

I myself, have been able to repeat work carried out with Professor Hiroshi Motyama from Tokyo looking at electrical changes over acupuncture points and have been able to show that these recordings are remarkably consistent, when looked at using a statistical technique which looks at similarities as opposed to differences called the co-efficient of variation. For example, doing a standard blood test like a haemoglobin with a split sample sent to two different laboratories, the results should have a co-efficient of variation of 15 per cent or less. If it is significantly less than 15 per cent or less then this is a repeatable and stable result, inevitably they will not be identical. The co-efficient of variation we have found on the electrical measurements over acupuncture points showed co-efficient of variation of an average of 6 per cent. This is truly a remarkable result (Kenyon JN, Pfeiffer, L, Brenton, M. A statistical comparison of repeatability in three commonly used bioelectronic devices: curling photography, segmental electrogram, and the AMI of Motoyama. *Acupuncture in Medicine* May 1998, Vol 16 No.1 p 40-42). My friend and long-time scientific colleague Glen Rein has produced an important experimental study showing the existence of chi (The use of DC electrodermal potential measurements and healers felt sense to assess the energetic nature of qi. Syldona, N, Rein, G. *The Journal of Alternative Complementary Medicine* Vol 5, No.4, 99 p 329-347). Professor William Tiller's work however, stands head and shoulders above any group world wide. Professor Tiller is emeritus professor of crystallography from Stanford. He has been studying these areas for nearly 40 years, more or less as a research hobby, but full time since his retirement. The point about his work and that of Glen Rein and my own work, is that this is experimental work, within the agreed rules of modern experimental science.

Professor Tiller's recent work, mentioned earlier in this paper is best described in his recent book, 'Conscious Acts of Creation' (Conscious Acts of Creation, the Emergence of a New Physics. William Tiller, Walter Dibble and Michael Cohane, Pavior Books ISBN: 1-929331-04-5, 2001). One other important area of subtle energy testing which most of you will be familiar with is so called muscle testing, (applied kinesiology). This is universally derided by conventional doctors, but it undoubtedly works, and many complementary practitioners use it.

In conclusion to this section, these subtle energy techniques are particularly vulnerable to classical entanglement between treatment and placebo groups, as described earlier in this paper. Therefore, they would not be studied effectively or honestly using an RCT format. This is exactly what many complementary practitioners have told their conventional colleagues, but are not being heard. This plea came out in the recent House of Lords commission on CAM. However, in the report a great deal of space was given to pedantic doctors of high academic standing, who said there is absolutely no reason whatsoever in their view, why CAM should not be testable using a double blind RCT format. It is perfectly clear to me from reading the report, that these doctors had not even devoted any thought whatsoever to the suggestions given by the complementary practitioners. There can be something breathtaking about the arrogance of doctors sometimes. What I have written here in this section, is good serious science. It is hardly known at all, I could almost certainly guarantee it would be new to the majority of the readership of this paper. Looking at medical history, this is the way new changes happen in medicine, they do not occur in the mainstream, very much on the boundaries. This is the case with subtle energies. I would hope that some of you may be inclined to look further with this work and may be it could be researched in an open-minded way, which has not been my experience to date.

## **Evidence Based Medicine**

The current international fashion is *evidence based medicine*. This arose originally in America, principally as a means of controlling medical costs. It is true that many American doctors abused their position and did excessive tests and unnecessary treatments on their patients, and insurance companies were finding it difficult to pay. They, therefore quite reasonably limited what doctors could do, on the basis of evidence. The gold standard is defined as the RCT. This has meant an increasingly tight rein on health spending. What this also means so far as CAM is concerned, as described earlier in this paper, is that CAM is even less and less likely to receive official support from the NHS or from private health insurance companies. This is of some major importance so far as our patients are concerned. Therefore, the debate in this paper, is not simply an academic exercise, it has real and important consequences.

The whole thought pattern of *evidence based medicine* is highly linear. In other words, we have problem (a) and we have intervention (b) and its statistical chances of success as determined by RCT's is x per cent. That is all very well for simple illnesses. However, the majority of chronic illnesses are complex, for example Chronic Fatigue Syndrome, cancer, multiple sclerosis to name but a few. It is these complex chronic diseases which form the majority of patients attending to complementary and integrated medicine practitioners. These illnesses need a systems approach which in simple terms essentially means approaching the clinical problem from a number of points of view all at the same time.

Systems Theory was developed in the 1950's by physicists as a means of describing the behaviour of complex systems. It is most famously enshrined in the work of Geoffrey Chew in the S Matrix theory, known as the Boot Strap Approach. This developed into systems theory (Capra,F. *The turning point science, society and the rising culture*, Flamingo 1982.) In the Systems approach each particular intervention, may produce a small percentage advantage. In order to detect this percentage advantage as being statistically significant from an RCT point of view, one would have to have a clinical trial in which the treatment arm and the placebo

arm each contained several hundred subjects. This is not feasible practically. I call this kind of medicine Titanic medicine, in other words I am always looking for treatment advantage and another few degrees on the rudder in time, means you don't hit the iceberg!

However, the vice of evidence based medicine gets ever tighter, and so it is even more difficult to discuss these ideas with an open minded audience. I would sincerely hope that our fledgling society could be such a forum where we could discuss these ideas, but I would not be so rash to suggest that any points or we are making as a society in this area would have any impact on medicine in general. However, it is better than nothing to at least be able to discuss these ideas.

David Horrobin ably grasped this problem in a sentence in his guardian piece on genomics, 'journals and grant giving bodies came to be dominated by the reductionists who were scathing about the complexity of whole organ, whole animal and especially whole human studies, which were seen as too full of uncontrollable variability to be interpretable'. This in my view is important, because simply turning away from the complexity of things denies that complexity exists in the first place which indeed it does. I would suggest therefore that the rigid view of evidence based medicine is equivalent to burying our head in the sand.

## **Creativity in Medicine**

My experience of creativity is that there has to be a particular level of freedom present in order for creativity to occur. This was brought home to me forcibly many years ago, when I had a patient who had lost an arm through an industrial accident. This man was an exceptionally capable engineer. He took up a hobby of building working replicas of steam locomotives. When I met him he had just finished modelling the Royal Scot. I was really interested in what he was doing and asked him if he could bring his model along to the surgery so that I could look at it. Sure enough, he

brought it along, and this model was enormous, nearly 3 and a half feet long, and a shining gleaming working locomotive. Now, he told me something most interesting. Being a perfectionist, he had made his model to such narrow tolerances, that it became so tight, that nothing would move. He then said to me that he had had to take it all to pieces again, make the tolerances less tight in order to give the mechanical system some freedom, and then at a critical point when the tolerances had been lessened sufficiently, the model worked perfectly. This I feel is what is happening in medicine today, in that modern medicine is aiming for perfection, for all sorts of reasonable and dubious motives, for creating a perfection which probably does not exist anyway, and is not perfection, only in the minds of doctors and their devotees of evidence based medicine.

**Returning to my original questions, firstly as to why CAM is so popular?**

Educated people who are the principal users of such approaches, have antennae which pick up that things are not quite right. They feel that there maybe something wrong with cancer treatments which are so potentially harmful and have such low success rates. So, another approach which doesn't have these downsides is of considerable interest to them.

**My second question, why is there such a huge chasm between research findings in CAM, and its use by the general populous?**

It would appear to me that we need to have a more creative view of the way we assess CAM, even if it does mean that the holy grail of randomised control studies is challenged. Perhaps we ought to face up to the realities of complex illnesses, rather than reducing them out of existence. This fools nobody.

**My third and last question is, what is the most challenging aspect of CAM?**

This undoubtedly is to do with ideas of vitalism and subtle energies. We are at last seeing some real insights into these areas and this, I think, will prove to be an increasingly interesting, challenging, and probably vitriolic debate.

I hope that I have interested all of you, made some of you think, and inspired a few.

Thank you for listening.

*Dr Julian Kenyon*

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