



...for treatment that works

Newsletter 60 January 2006

STUDENT AWARD-WINNERS AT 17TH AGM

TWO TALENTED students were present at HealthWatch's 17th Annual General Meeting at London's Royal Society of Medicine in October to receive awards from HealthWatch president Nick Ross.

Kar Hao Teoh, student at Edinburgh University Medical School, and Wendy Ellingford, studying nursing at the University of Bangor, each received a £500 first prize in this year's annual HealthWatch Student Clinical Research Protocol Appraisal competition which is sponsored by the Ajahma Charitable Trust. Both had submitted excellent papers assessing the quality of a number of protocols for trials of alternative remedies. Second prize in the

medical students' category went to Emma Court, of Barts and the London QMUL, and three runners up were also sent cheques.

This year's winner of the annual HealthWatch Award in recognition of his contribution to healthcare research is Europe's foremost complementary medicine research leader, Professor Edzard Ernst. For picture and more news from the HealthWatch AGM see pages 3, 4 and 5 of this issue.

Is complementary medicine cost effective?

MORE DOUBTS have been cast over the value of complementary medicine in a recent issue of the *British Medical Journal*.

The cost-effectiveness of using complementary treatments in the NHS has been the subject of controversy since October's publication of the Smallwood report which was commissioned by the Prince of Wales' Foundation for Integrated Health (see John Garrow's report on page 2). Smallwood proposed that complementary therapies should be given a greater role in the NHS. The evaluation of medical research on which this recommendation was based, however, was carried out by a team that declare not one medically qualified member.

As an example of how poor the evidence really is, the *BMJ* now

reports that researchers from the Department of Complementary Medicine at the Peninsula Medical School, Universities of Exeter and Plymouth have carried out a systematic review of cost effectiveness analyses of complementary treatments¹. They found only five studies done in the UK before April 2005, one of acupuncture for headache and four of spinal manipulation for back pain.

They conclude that these treatments represent an additional cost to usual care with questionable clinical benefit.

Reference

Cost effectiveness of complementary treatments in the United Kingdom: systematic review. *British Medical Journal* 2005; **331**: 880-1. View online at <http://press.psprint.co.uk/bmj/october/prr880.pdf>

The James Lind Alliance

RESEARCH INTO the effects of treatments often overlooks the shared interests of patients and clinicians. For example, when patients and health professionals in one study were asked to identify their priorities for research on the management of osteoarthritis of the knee, there was little enthusiasm for the kind of drug-based research that the pharmaceutical industry typically supports. Instead, patients and clinicians wanted more rigorous evaluation of the effects of physiotherapy and surgery, and better assessment of the educational and coping strategies that might help patients to manage this chronic, disabling and often painful condition.

Enter the James Lind Alliance: a non-profit-making initiative that has been established to bring patients and clinicians together

in "Working Partnerships" to help ensure that those who fund health research are aware of what matters to patients and clinicians. One such partnership has been set up between Asthma UK and the British Thoracic Society, to help improve all aspects of care and treatment of people with respiratory disease.

The James Lind Alliance web site www.lindalliance.org/index.asp has information about the Alliance including how to become involved, for example by becoming an affiliate, and offers a number of interesting publications downloadable in pdf format.

Reference

Tallont *et al. Lancet* 2000; **355**: 2037-40.

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A “fresh look” at CAM from Smallwood

A “FRESH and independent look ... at the contribution which complementary therapies can potentially make to the delivery of healthcare in the UK,” was commissioned by the Prince of Wales, writes John Garrow, vice-chairman of HealthWatch. The result, known as the Smallwood Report¹, was embargoed until a press conference at 11.30am on 6th October 2005. The purpose of the embargo was presumably to achieve maximum coverage by the opinion leaders in the media: if so it misfired.

The journalists invited to the press conference were presented with the 193-page report, and a six-page press release, which was (of course) strongly in favour of the report. They had no time before filing their story to make a critical assessment of the main report, and no enthusiasm to cite fully the press release they had all been given, so the media response was very muted.

The lead author, Mr Christopher Smallwood, was described in the press release as “a leading economist who has held a wide range of senior positions in government, industry, banking and the media”. The main conclusion of the report was that, “there appears to be sufficient evidence to suggest that some *complementary* therapies, listed in the report, may be more effective than conventional approaches in treating certain chronic psychosocial conditions, and that specific treatments offer the possibility of cost savings, particularly where they can be provided in place of, rather than in addition to orthodox treatments.” (my emphasis). It is undoubtedly true that, if a therapy such as homoeopathy is a more effective treatment for a condition than, for example, drug treatment, or surgery, there is a strong possibility of cost savings. However, a recent systematic review of 110 placebo-controlled trials of homoeopathy has found little evidence that homoeopathy is effective². It is alarming that asthma is one of the conditions for which homoeopathy is suggested as an alternative to conventional therapy, because inadequately treated asthma may be fatal.

“It is alarming that asthma is one of the conditions for which homoeopathy is suggested as an alternative to conventional therapy, because inadequately treated asthma may be fatal”

The Report highlights publications that show that the main varieties of CAM therapy (manipulation, acupuncture, homoeopathy and herbal medicine) might be cost-effective substitutes for, or additives to, conventional medicine. Publications that show CAM therapies probably are not cost-effective are glossed over. Therefore this is not “a fresh and independent look” at CAM, but an attempt to support an initial hypothesis. Obviously the key to the whole debate concerns the cost-efficacy of CAM, and that can only be determined by well-designed controlled trials, which are seldom available.

The report states: “Our principal recommendation therefore is that Health Ministers should invite NICE to carry out a full assessment of the cost-effectiveness of the therapies we have identified...”, but of course NICE can only evaluate evidence from well-controlled trials, and (as noted above) there are few good trials. Consequently Smallwood recommends, “Funds available for research into the cost-effectiveness of CAM treatments should be increased.” In the Foreword to the Report Professor Sir Graeme Cato, Chairman of the GMC, charitably opines: “This report indicates a practical way forward...” since he evidently believes that Smallwood’s suggestion is novel.

It is not a novel suggestion. The 6th Report of the House of Lords Select Committee on Science and Technology in November 2000 clearly set out as priorities the following three questions about CAM. “Does the treatment offer therapeutic benefits greater than placebo?”, “Is the treatment safe?” and “How does it compare, in medical outcome and cost-effectiveness, with other forms of treatment?”.

In 2003 a fund of £1.3m was made available for CAM research,

but the projects funded were not addressed to the three priority questions set by their Lordships. The Department of Health chose instead to fund studies on male cancer patients’ views on CAM therapy, on the training of more CAM practitioners, and on the clinical decision-making processes of homeopathic doctors³. Excellent research on the cost-effectiveness of CAM therapies has been done by Professor Ernst’s team at Exeter, but they were not beneficiaries of the £1.3million fund.

So should another tranche of taxpayers’ money be earmarked for proper evaluation of the cost-effectiveness of CAM therapies? Possibly, but only under strict conditions such as these:

1. The previous funding was not used to answer the Lords’ “priority” questions: this requires an explanation (if not an apology) and a guarantee that future public funding will be used to assess the efficacy, safety and cost-effectiveness of selected CAM therapies.
2. The protocol for evaluation of candidate CAM therapies must be definitive: if it is not going to be possible to conclude that the chosen therapy is, or is not, safe and cost effective, there is no point in doing the evaluation. If it is safe and cost-effective it should be made available on the NHS, but if not it should not be available on the NHS. One reason for the current confusion is that many CAM therapies such as “manipulation” or “herbal medicine” are not standardized. If a trial shows that a therapy in these groups is not more effective than in placebo controls, there is always the counter-argument that a slightly different version of the same therapy would have been effective. At present the differences between the manipulations of chiropractors and osteopaths are poorly defined, and the potency of herbal medicines may vary greatly depending on the conditions in which the herb was grown and the medicine prepared.
3. If it is proposed that the therapy should be used as an alternative to conventional treatment (rather than as a complement to it) the issue of responsibility is crucial. If, under the aegis of the NHS, a mother takes her severely asthmatic child to a homeopathic practitioner instead of a registered GP, and the child dies, who bears the responsibility?

There is no doubt that many middle-class patients find complementary therapies highly satisfactory. It is probable that this satisfaction derives largely from the unhurried and caring ambience in which CAM consultations are conducted. If CAM therapies are made available to NHS patients at taxpayers’ expense, and are required to meet cost-effectiveness targets, it will not be possible to maintain the leisurely tempo that is so attractive. Therefore it could be that if CAM therapies are made available on the NHS they will become less effective than they were in private practice.

John Garrow

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3. *Focus on Alternative and Complementary Therapies* 2003; **8**: 398.

A MOST DISTINGUISHED HISTORY

FIIFTY-FOUR PEOPLE were present for HealthWatch's 17th Annual General Meeting*, which was held at the Medical Society of London and chaired by our president, Nick Ross. Professor Garrow began the meeting with an overview of the past and future activities of HealthWatch in his ninth, and final, Chairman's Report.

The Campaign Against Health Fraud (1989 to 1990), led by Caroline Richmond, was the forerunner of HealthWatch, which became a Registered Charity in 1991. In those days we were mainly concerned with exposing charlatans who made false claims for untested treatments. A more positive move starting from 1993 was to present an annual Award to the person who had contributed most to our objective of providing reliable information to the public (or media) about effective healthcare. The distinguished list of winners from that date to the present consists of Geoff Watts, Petr Skrabaneck, David Sackett, Sir Richard Doll, Annabel Ferrieman, Polly Toynbee, Bernard Dixon, John Diamond, Claire Rayner, Michael Baum, Peter Wilmshurst, Richard Smith and now Edzard Ernst.

Another positive step was taken in 2003 (and repeated annually) when the Ajahma Charitable Trust funded us to offer a Student Prize to undergraduate healthcarers who showed they could best appraise clinical research protocols. "Evidence-based medicine" is a mockery if the people who practise it cannot distinguish between good and bad evidence of efficacy.

"There is little evidence that this type of electromagnetic radiation is a danger to health, but if the rules are strictly applied it may make MRI scanning impossible, so patients and staff will be exposed to much more dangerous X-radiation"

Looking to the future, Garrow identified several problems with which Dr David Bender—the incoming chairman—and his successors would have to grapple. Perhaps the most pressing was the debate about the potential contribution of CAM to the cost efficacy of the NHS. (A review of a recent document—the Smallwood report—which presses the case for the "integration" of CAM is on the facing page of this issue).

Another serious threat to good clinical research, and hence good healthcare, is legislation designed to improve the documentation and safety of clinical trials. The effect of the EU Directive 2000 on clinical trials funded by non-profit sponsors was the theme of *HealthWatch Newsletter* 53 (April 2004). A recent example of legislation designed to protect healthcare staff concerns the rules (to become effective in 2008) limiting exposure to electromagnetic fields. There is little evidence that this radiation is a danger to health, but if the rules are strictly applied it may make MRI scanning impossible, so patients and staff will be exposed to much more dangerous X-radiation.

The age-old problem of false claims for untested treatments keeps recurring, so we continue to challenge misleading advertisements. For example Garrow cited an advertisement in *The Independent* (12th October 2005) that claimed that you can "Get the figure you want for just £19.95 with SlimFly 2005". This device comprises small battery-powered patches that are said to cause fat loss locally wherever they are stuck on the skin. Garrow complained to the Advertising Standards Authority that the claims were scientifically impossible, and this complaint was upheld. The



advertiser (Bristol Health) immediately withdrew the advertisement (see www.asa.org.uk report, 7th December). There is more about advertising in this issue (page 7).

IN CONCLUSION Garrow thanked the many people who had generously worked for HealthWatch since its inception (see website for full listing), and expressed his confidence that, with David Bender and his successors, it would continue effectively to promote treatment that works.

At the end of the AGM Nick Ross presented certificates and cheques for £500 to the First Prize Winners in the Student Clinical Research Protocol Appraisal competition: Kar Hao Teoh (medical) and Wendy Ellingford (nursing). Certificates and cheques were sent by post to the other prize winners.

The HealthWatch Award 2005 was presented to Edzard Ernst, professor of the department of Complementary Medicine at the Peninsula Medical School of the Universities of Exeter and Plymouth, whose address entitled "CAM: the good, the bad and the Ugly" is reported on pages 4 and 5 of this issue. It was followed by a spirited question session, and the consensus was that Professor Ernst was indeed a worthy Award winner who had contributed greatly to the charitable objectives of HealthWatch.

*John Garrow
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Below:
Nick Ross with nursing student Wendy Ellingford (left) of the University of Bangor, winner of first prize for the HealthWatch Student Prize competition (nursing student category)



Above:
Medical Student Kar Hao Teoh (left) of Edinburgh University accepts first prize for the HealthWatch Student Prize competition (medical student category)

*The Agenda, the full text of the reports by the Membership Secretary and Treasurer, and more pictures can be seen on the HealthWatch website www.healthwatch-uk.org

COMPLEMENTARY MEDICINE: THE GOOD THE BAD AND THE UGLY

HONOURING ME with this year's HealthWatch Award seems a doubly courageous act, began Edzard Ernst, as he accepted the 2005 HealthWatch Award. It is courageous of HealthWatch as I am a researcher of the very subject this organisation often criticises, and it is courageous of me to accept the award as it is unlikely to result in praise from the proponents of complementary medicine (CM).

Courageous or not, it is definitely timely to put the spotlight on CM. Patients love it, the media and many people in power promote it, yet few people seem to understand it. In the following discussion I will try to highlight some of those aspects of CM which, I feel, are currently plagued by confusion, lack of transparency and sometimes even wilful deceit. Using the headings 'good, bad and ugly' inevitably requires a degree of simplification. In reality things are rarely black or white but different shades of gray.

The good

It has always puzzled me how anyone could be for or against something like a medical intervention. Does it make sense to be in favour of appendectomy or anticoagulants? I don't think so! Why then do people hold emotional views on CM?

It seems to me that, when it comes to healthcare, likes and dislikes should matter far less than evidence. Healthcare is not a fashion where one might legitimately have this or that opinion, nor should it be confused with religion in which one either believes or doesn't. Medical treatments either demonstrably and reproducibly work or they don't. Therefore reliable evidence on what is effective and safe must always be "good"—to view a trial of spiritual healing, homeopathy, for example, which fails to show that the tested intervention works (e.g. is better than placebo) as "negative" seems ludicrous to me.

Examples include the recent (first ever) trial of shark cartilage for cancer¹. Its results showed that it has no beneficial effects. Surely this must be good news all around. Sharks will not die needlessly, cancer patients will not attach false hopes to a bogus treatment, money can be saved for effective treatments. The only people who could possibly perceive this finding as "negative" are those involved in peddling bogus cancer cures and swindling desperate patients and their families of their savings.

Whenever we demonstrate that CM does work, the situation could quickly reverse. Examples for this scenario can also be found easily. Compelling evidence now suggests that real acupuncture is better than sham acupuncture for a range of pain-related syndromes, e.g. back pain². If the findings are based on good science, it must be good news: it could help millions who suffer from



back pain, particularly as conventional medicine is not very successful in dealing with this problem. Similarly, there are now several systematic reviews of rigorous clinical trials demonstrating that certain herbal medicines are efficacious for certain indications³ (see table 1, below left). Making more general use of these options could benefit many patients—provided that the risks of these remedies do not outweigh the benefit.

It follows, I think, that finding the truth (arguably this is what science should be about) is always a good thing in medicine. As long as the results are reliable, they can only further our knowledge and will eventually improve healthcare. It also follows, I hope, that the incessant criticism directed at the work of my unit by enthusiasts of CM is based on a profound misunderstanding: we may have shown that this or that form of CM is not effective or not safe, but I fail to see that this was in any way negative for those who, in medicine, matter most: our patients.

The bad

In CM, many researchers seem to use science to prove that what they believe is correct. This is not what I was taught. Science is not for proving but for testing. The former approach does not only reveal an unprofessional attitude, it is prone to seriously mislead us all. Emotions and strong beliefs can lead to bias⁴, and bias leads to bad science.

Sadly poor science is rife in CM. Here I could cite hundreds of examples. A recent study of anthroposophy⁵ may suffice. Its aim was "to compare anthroposophic treatment to conventional treatment". Patients elected to consult either an anthroposophic or a conventional doctor. The results showed more favourable outcomes for the former approach and the authors concluded that "anthroposophic treatment... is safe and at least as effective as conventional treatment". Because of numerous sources of bias and confounding, many other conclusions are just as likely. The type of patients who elect to see an anthroposophic doctor may differ in many ways from patients who consult a conventional physician.

This example highlights much of what can be (and frequently is) wrong with CM research. It typifies how the aims of a study can be mismatched with the methodology and how the results may not justify the conclusions. If I had to name the characteristic that I find most disturbing in published CM research it would be this frequent inconsistency. Wishful thinking is of course only human, but the regularity of this incongruence in CM is nevertheless most remarkable.

What follows is, I believe, more than obvious: not only is good science good but bad science is bad. It is not bad because some 'out-of-touch' scientists in the 'ivory towers' think so. It is bad because it leads to wrong decisions in healthcare. Ultimately this will be detrimental to those who we should care for most: our patients.

The ugly

The bad is bad enough, but the ugly is worse. I define ugly here as directly or indirectly preventing (future) patients from receiving the best available healthcare. I could lament about many aspects of CM that fall into this category: dishonesty, neglect of medical ethics, exploitation of vulnerable patients, political interventions are themes that come to my mind (see table 2, above opposite).

The over-riding principle in all this is, I think, the application or pro-

Table 1
Systematic reviews suggesting efficacy of herbal medicines

| Plant name | Indication |
|----------------|--|
| Andrographis | Upper respiratory tract infection |
| Cranberry | Urinary tract infection |
| Devil's claw | Osteoarthritis, back pain |
| Ginkgo | Intermittent claudication, dementia |
| Ginger | Morning sickness |
| Hawthorn | Chronic heart failure |
| Horse chestnut | Chronic venous insufficiency |
| Kava | Anxiety, menopausal symptoms |
| Nettle | Benign prostatic hyperplasia |
| Peppermint | Abdominal pain, non ulcer dyspepsia, IBS |
| Saw palmetto | Benign prostatic hyperplasia |
| St John's Wort | Depression |
| Yohimbe | Erectile dysfunction |

Data extracted from reference 3

Health Watch Awardwinner 2005

Table 2
Preventing patients from receiving the best available healthcare

| Principle | Examples |
|--|--|
| Administering unsafe treatments | <ul style="list-style-type: none"> Asian herbal mixtures are sometimes contaminated with toxic heavy metals Upper spinal manipulation has been repeatedly linked to arterial dissection followed by stroke |
| Using invalid diagnostic techniques | <ul style="list-style-type: none"> Iridology has been frequently tested and not found to be reliable 'Live blood analysis' is used without evidence that it is valid |
| Not using CM that has been shown to do more good than harm | <ul style="list-style-type: none"> Saw palmetto is effective and safe for BPH, but in the UK it is hardly used St John's wort is effective for depression, but in the UK it remains under-used |
| Misleading consumers through irresponsible advice | Millions of web sites, hundreds of books, weekly columns in the print media, and even a UK government-sponsored patient guide ^a fail to provide responsible advice |
| Political interventions | <ul style="list-style-type: none"> The scarce research funds by the DoH were not used for studying efficacy and safety as recommended by the 'Lord's Report' Despite the lack of reliable data, the 'Smallwood Inquiry 2005' recommended that large sums of money could be saved if more homeopathy was used in the NHS. |
| Unethical behaviour in clinical practice | <ul style="list-style-type: none"> A survey showed that the majority of UK chiropractors fail to adhere to their own ethical code (e.g. regarding informed consent) A 'Dr Foster' study demonstrated that many CM practitioners fail to comply with 5 very basic "best practice criteria". |
| Unethical behaviour in research | Despite the wide-spread use of CM, funds for researching issues such as safety and efficacy of CM remain largely unavailable |

motion of one standard for conventional medicine and another for CM. Double standards are typified, I fear, in the new and increasingly popular movement (its proponents would probably say 'philosophy') of 'integrated medicine'. Its two basic tenets are that integrated medicine cares for the individual as a whole rather than looking at a diagnostic label ; and integrated medicine uses "the best of both worlds"⁶.

Both claims look superficially convincing and plausible. At closer inspection they are, however, neither⁷. Caring for the whole individual has always been and will always be a hallmark of any good medicine⁸. It is thus not legitimate to adopt it as a main characteristic that differentiates 'integrated medicine' from conventional healthcare—on the contrary, conventional healthcare professionals who work towards optimising patient care must feel insulted by it. Using "the best of both worlds" (i.e. CM and mainstream healthcare) sounds fine until one realises how crucially it hinges on the definition of "best". In modern healthcare, this term can only describe those treatments that demonstrably and reproducibly do more good than harm. But this is precisely what evidence based medicine (EBM) is all about. Either 'integrated medicine' is synonymous with EBM (in which case the term would be redundant) or it applies a different standard for the term "best".

Considering what 'integrative medicine' in the UK currently promotes⁹ (see table 3, right), one has to conclude that the latter applies. This discloses integrative medicine as an elaborate smoke screen for adopting unproven treatments into routine healthcare¹⁰. In the long run, this strategy will therefore turn out to be detrimental to everybody, including patients and even CM itself.

Conclusion

I am convinced that CM has much to offer. In the past 12 years, we have identified numerous CM interventions that generate more good than harm³. Many more therapies need scientific testing and

some of them will turn out to be useful. The only way to find out is to conduct rigorous research. Poor science will inevitably mislead us. And double standards are detrimental for everyone. In a nutshell, good science is good, bad science is bad and increasing the risk of patients not receiving the best available healthcare is ugly.

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Table 3
Selected statements from a recent (government-sponsored) patient guide^a

| Statement ^b | Evidence ^c |
|---|---|
| "...the risk of a stroke [after upper spinal manipulation] is between 1 and 3 in 1 million manipulations." | There are many published estimates that suggest much higher incidence figures. However, due to extreme under-reporting, the risk remains undefined. |
| "Acupuncture is being increasingly used for people trying to overcome addictions..." | A Cochrane review fails to demonstrate efficacy of acupuncture for this indication |
| "Craniosacral therapists treat a wide range of conditions from acute to chronic health problems..." | There is no trial evidence at all to suggest that craniosacral therapy is effective |
| "Healing is used for a wide range of...conditions. Research has shown benefit in many areas, including healing of wounds, ...migraine or irritable bowel syndrome..." | The best evidence available to date fails to demonstrate effects beyond a placebo response |
| "Homoeopathy is most often used to treat chronic conditions such as asthma" | A Cochrane review fails to demonstrate efficacy of homoeopathy for asthma |

^a Its aim was to "give [you] enough information to help you choose a complementary therapy that is right for you"

^b The guide does not contain anything else by way of evidence on effectiveness (but was commissioned by the DoH to provide such evidence)

^c Evidence extracted from reference 3

IF IT'S PUBLISHED IT MUST BE OK: PEER REVIEW OF SCIENTIFIC RESEARCH



FOR MANY journalists and broadcasters, and even more so for their audience, it is difficult to know whether or not the scientific and medical results they are presented with are sound and based on well-conducted research, writes *David Bender*, chairman of *HealthWatch*. The crucial test is whether the results have been published in a “peer-reviewed” journal or not. *Sense About Science* have just published a leaflet explaining the process and value of peer review¹ with a link allowing free download of their full report “Peer review and the acceptance of new scientific ideas”.

When a research paper is submitted to a journal, one of the editors reads it to decide whether it falls within the remit of the journal and whether it is likely to merit publication. If it does, the next step is to send it to two or more scientists working in the field who have no connection with the people who have conducted the research. These people are the referees or reviewers, and it is their task to scrutinise the paper and evaluate its findings in the light of other research in the field. In most cases the referees are anonymous—i.e. the authors receive their reports but are not told who they are. There is an element of trust here—the referees are sent the paper in confidence, and are expected to declare to the editor any connection they may have with the authors. The referees are also, of course, on trust not to delay their report while they repeat the original study and offer it to another journal as their own work.

Sometimes (rarely) refereeing a paper is a simple task and the referee can report back that it is a fine piece of work, with all the methods adequately described, the results clearly presented and the conclusions appropriate. More usually, the referees raise questions to the authors for a variety of reasons:

- The paper may not describe the methods adequately (the yardstick here is “could I go away and repeat their experiment or study from the information given here?”)
- The results may not be clearly shown. Quite often a referee will suggest an alternative way of showing the results, or ask for further information.
- The conclusions may be too speculative and far-reaching for the evidence provided by the study, or may ignore research from elsewhere that does not fit with the authors’ (preconceived) ideas.

Most papers are returned to the authors for revision in light of the referees’ comments at least once; some are rejected because the referees think they are too deeply flawed, or make no useful contribution to our knowledge in the field.

The problem is that it is very easy, with only a modest computer, to produce what looks like a fine scientific or medical journal that does not have an editorial board of experts in the field and does not have any review of material published. People might suspect that “The Chiltern Journal of Bio-Medical Research” was bogus if the editorial address was a post office box number, or my home address. However, if the given address were my university, or a hospital, it would be more difficult. Of course, the name of the publisher might help, but although the majority of peer-reviewed journals are produced by a small number of large publishers, there are still a number of small “niche market” companies that publish highly reputable journals.

If we go away from paper publishing to on-line publishing, the problem is even bigger. In recent years a number of high quality online-only journals (e.g. the *Public Library of Science*, or *PLoS*, series) have been developed to ensure open (free) access to the peer reviewed results of scientific and medical research. A number of organisations funding research now require that the results of all research they support must be published in journals that permit open

access to all, without paying a subscription or a fee to download or read a paper. However, it is very easy to design a website that looks like a reputable journal. Indeed, as those who have been fooled by emails purporting to come from their bank have discovered, it is very easy to set up a website that looks very like the bank’s. For a few hundred pounds I could set up an electronic “Chiltern Journal of Bio-Medical Research” that had no street address at all, but accepted submissions electronically (as is the case with most reputable journals anyway; gone are the days when papers were submitted in thick envelopes, now they arrive in the editor’s e-mail inbox as attachments, or are submitted through more elaborate electronic management systems). I could even have an impressive list of editors and editorial advisers—it would be difficult to know whether these were real people or not, and I could even include a few well-known scientists without their knowledge or permission.

A responsible journalist will normally have a list of scientists to contact when he or she is unsure about the value of a report or press release, and the Science Media Centre of the Royal Institution in London² offers a list of (vetted) scientists willing to be interviewed on various topics. It would be nice to think that reports of scientific advances in at least the serious newspapers were checked in some way, but all too often a scientific “advance” is reported by a social affairs or “health” correspondent rather than by a medical or science correspondent—and there can be some glaring errors in the science that is reported. Even worse, there is little or nothing we can do about the dogmatic and unscientific media “gurus” whose columns in serious newspapers are totally unscientific and promote various untested and unvalidated therapies and diets.

Even with peer review rogue science can be published

Sometimes this is a case of simple fraud. A number of eminent scientists have been forced to retract papers that were based on fraudulent data provided by their research students, and in at least two cases that I know of this has resulted in destruction of a distinguished career. The *HealthWatch Award* in 2003 went to Peter Wilmshurst for his dogged persistence in exposing fraud in medical research³.

In other cases, commercial interests place more or less subtle pressure on journals and their editors. The *HealthWatch Award* in 2004 went to Richard Smith, the former editor of the *British Medical Journal*, who advanced the thesis that medical journals is an extension of the marketing arm of drug companies⁴.

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SLOWING THE MARCH OF UNREASON

I RECENTLY FINISHED reading Dick Taverne's latest book 'The March of Unreason'. It both stimulated and depressed me, writes Les Rose. I was stimulated by the wealth of information which confirmed my suspicions that a lot of received "wisdom" isn't true at all. I was depressed by what appears to be an inexorable slide into an abyss of New Age superstition and trendy irrationality. Shortly after that I attended the HealthWatch AGM at which there was lively discussion on what we, a small group of people who care about evidence in health, can do to stem this tide.

Sadly, in health care we are up against some major opponents. Prominent government figures, as well as government policy as a whole, seem to place patient choice above consideration of whether what they choose will do them any good. The Royal Family not only uses complementary and alternative medicine (CAM) enthusiastically (except, apparently, when at death's door), but uses its unelected position to try to influence government policy. The Prince of Wales' Foundation for Integrated Health—a thinly disguised lobby group—has now personally supported publication of a report which claims that the NHS could save money by using more CAM¹. This new report, prepared by a team who themselves declare no experience in health, even has a foreword written by the President of the General Medical Council. Meanwhile much-needed research funding for CAM has been dribbled out by the government, and most of what little there is has been diverted away from rigorous clinical researchers and into studies not of efficacy or safety, but of sociology.

Am I being too pessimistic? The facts speak for themselves.

The Department of Health insists that "Complementary health care: a guide for patients"², issued by the Prince of Wales' Foundation earlier this year, was never intended to cover evidence for efficacy and safety. However this guide was partly funded by the government, and I have obtained the commissioning papers³ under the Freedom of Information Act. These quite clearly state that the evidence base *was* to be included. Ministers now decline to answer any further questions about this.

"The Lancet recently published a seminal meta-analysis of homoeopathy⁴, showing that there was no evidence for efficacy, and an editorial called for a halt to its use at public expense⁵. Yet the NHS continues to fund five homoeopathic hospitals."

The government has spent over £18 million on upgrading the Royal London Homoeopathic Hospital. I have obtained the Business Case for this project⁶, and it contains not one word about the health care value which homoeopathy might be expected to deliver to patients. The Lancet recently published a seminal meta-analysis of homoeopathy⁶, showing that there was no evidence for efficacy, and an editorial called for a halt to its use at public expense⁷. Yet the NHS continues to fund five homoeopathic hospitals.

The NHS Trusts Association runs the NHS Directory of Complementary and Alternative Practitioners⁸. Among the practices described there are crystal therapy and Bowen therapy. These and various other 'therapies' enjoy implied NHS endorsement by virtue of inclusion in the guide under the NHS logo. The chairman of the NHS Trusts Association assured me that they were advised by Professor Edzard Ernst⁹, who in turn personally assures me that he has never worked for them¹⁰.

Five years after the House of Lords Select Committee Report on Complementary and Alternative Medicine¹¹, in which it called for NICE appraisal of the most commonly used 'therapies', the government has still not referred any for appraisal. This is despite accepting the Report's recommendations at the time. The health minister Lord Warner assures me that a leading academic research unit has been asked to select therapies for appraisal¹², but that none has been found "suitable". The unit in question denies that it has

received any such commission from the Department of Health¹³.

I have obtained from the two main opposition political parties their policies on CAM¹⁴. The Labour Party, however, does not appear to have any policy. When I asked, they referred me to the Department of Health, whose policies—as I suggest above—are quite inconsistent.

One could be forgiven for feeling despondent. But, small as we are, we can all do something. Here are some examples which I hope will inspire you.

Here in Salisbury an acupuncturist advertises in the local newspaper. His advertisements used to make all sorts of claims, listing many conditions for which acupuncture was supposedly effective. I checked these against the literature, the best source I know being Bandolier¹⁵. I complained to the Advertising Standards Authority. All I had to do was to scan the advert, and upload it to the ASA website¹⁶, with a short narrative describing the complaint. It took about 10 minutes. The ASA acted quickly, and rejected the anecdotal evidence that the advertiser offered. The result is that the acupuncturist has removed from his advertisement all claims to treat any particular condition, and now correctly states his background—which is in traditional medicine at Beijing University, and not a 'consultant physician' at all, as the original ad had claimed.

A company called Windsor Health regularly advertises in the national press. I sent the ASA their advertisement for a book on the supposedly amazing health properties of vinegar. The ad was stopped. Windsor Health claimed it was an "administrative error".

As a member of two professional bodies, I take every opportunity to write articles on research into CAM, and on the public policy surrounding it. My papers have appeared in the journals of both the Institute of Clinical Research and the Institute of Biology, read by around 22,000 people in total.

But we can't win them all. For example, I have been fighting a battle with the Medicines and Healthcare products Regulatory Agency (MHRA) about herbal medicines. About 18 months ago I reported a Chinese medicines shop to the MHRA, for advertising in its window the usual long list of outrageous claims¹⁷. Despite promises of action from a senior MHRA official, the shop continues to trade as before. The BBC recently announced that the MHRA is to crack down on such shops¹⁸, but only because of the safety issue (many Chinese herbal products contain toxic adulterants). There still appears to be no intention to do anything about claims with no evidence.

I am passionate about rationality, critical thinking, and evidence in all areas of life. Some would say that this sort of activity is all a waste of time, as the opposition is so strong and most of the general public would rather believe the unbelievable. However I draw great strength from the writings of critical thinkers, and Edmund Burke (1729–1797) provides two of my favourite quotations:

"All that is necessary for the triumph of evil is that good men do nothing."

"No one could make a greater mistake than he who did nothing because he could do only a little."

Over to you now...

Les Rose
Consultant clinical scientist and medical writer

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PRINCE'S DELIGHT AT SUPPORT FROM "QUACKS"

THE WELSH SECRETARY Peter Hain has reportedly indulged in some less-than-scientific logic in his advocacy for more complementary therapy within the NHS. At a recent gathering of GPs who integrate complementary and conventional medicine in their practice, Hain declared that he had become a convert after using homoeopathy on his first baby, Sam, who suffered from eczema and asthma. He is quoted in the *Guardian* as saying, "With the help of homoeopathy and tight restriction on the sort of food our son could eat, both ailments went away."

HealthWatch Chairman, David Bender, comments, "The first lesson drilled into me as a student was that in any experiment you change only one thing at a time, since otherwise you cannot tell which change has caused an effect. I fear that Peter Hain has been misled. The problem is that there were two interventions, so we cannot tell easily which was effective. There is scant evidence of efficacy for homeopathy¹. However, there is a reasonable body of

evidence that both asthma and eczema may, in some cases, result from food allergy²."

The meeting was organised by the Prince of Wales's Foundation for Integrated Health. The Prince of Wales later spoke of his delight that more than half of GPs are now offering some sort of complementary therapy, saying, "I can't tell you how pleased and proud I am that so many eminent and sensible quacks are joining with my foundation."

Guardian, 13th October 2005.

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