

A Check Without Balance:

How double-standards are being used to remove homeopathy from the NHS

On 22 February the House of Commons Science and Technology Committee (CS&TC) published its *Evidence Check 2: Homeopathy*. This report concluded that “The funding of homeopathic hospitals ... should not continue, and NHS doctors should not refer patients to homeopaths”,[1] and stated that “we cannot see how further research on the efficacy of homeopathy is justified”. [2] The government said it would respond within 60 days, but the calling of the General Election led the Department of Health to announce that there would be no response. For the same reason there has been no debate of an Early Day Motion which heavily criticises the report.[3] The new coalition government had said that it would respond to this report by the start of the summer recess, but is now saying that it needs longer to consider the report and its policies. As a result there has been no Parliamentary scrutiny of the report. Meanwhile there has been detailed criticism of the report by homeopaths from the British Homeopathic Association[4] and *Homeopathy: Medicine for the 21st Century*,[5] as well as criticism from the Society of Homeopaths, the largest register of homeopaths in the UK.[6]

Nonetheless, in April the Pharmaceutical Society of Northern Ireland (PSNI) used the CS&TC’s conclusions to justify proposals to change its professional guidance for pharmacists.[7] If these changes are accepted, they will restrict the public’s access to homeopathic medicines. On 15 May *The Telegraph* reported that the British Medical Association (BMA) annual conference of junior doctors has used the conclusions to justify calling homeopathy “witchcraft”. Junior doctors have demanded that homeopathy be removed from the NHS, and that they should no longer spend part of their training rotations in homeopathic hospitals.[8] Less than a week later *The Herald* reported that “Training for junior doctors at NHS Scotland’s only homeopathic hospital has been axed”, explaining that “NHS Greater Glasgow and Clyde health board announced that the training programme at the hospital would be scrapped this summer.”[9] On 11 June *Pulse Today* reported that the conference of the Local Medical Committees (LMCs) had voted through attacks on homeopathy in the NHS.[10]

The result of this has been that on 29 June the BMA annual representatives meeting in Brighton voted for seven motions attacking homeopathy.[11] These included demands that pharmacies should place homeopathic medicines “on shelves clearly labelled ‘placebos’”; that “no UK training post should include a placement in homeopathy”; that “homeopathy should no longer be funded by

the NHS”; and that “homeopathy should be first in line for NHS cuts in this economic crisis since it is unproven and expensive”. These motions contain factual errors arising from the CS&TC report, and the proposers used highly perjorative language to make their case. Members of the Faculty of Homeopathy (representing fully qualified doctors who have gone on to study homeopathy) were denied an opportunity to speak against the motions. The motions were passed with a 3 to 1 majority, but around 150 representatives voted against.

The significance of this decision by the BMA can be better understood by looking at what happened to Tunbridge Wells Homeopathic Hospital. In 2008 Simon Singh, a trustee of Sense About Science, wrote that

On Saturday night, perhaps for the first time in history, there was a round of applause at the announcement of a hospital closure.[12]

He went on to explain that the reason for the closure was “a huge drop in the number of referrals”. [13] In its written evidence to the CS&TC, NHS West Kent revealed that while 52% of West Kent GP practices referred patients to homeopathy, less than 1% of patients were referred, and then (my emphasis) “Almost all referrals for homeopathy [were] at the request of the patient”. [14] Because of the small number of referrals it was not possible to assess clinical or cost effectiveness,[15] and so it is hardly surprising that Dr Thallon, Medical Director of NHS West Kent, could tell the CS&TC that “evidence in favour of homeopathy is so weak as to not make it a priority.”[16] There has been a continuing reduction in the number of referrals across the UK, so that at the Royal London Homeopathic Hospital (RLHH) in 2009, for example, “referrals were down by around 20% in October compared with the same month last year”. [17]

What this means is that the availability of homeopathy in the NHS is not determined by the success of NHS doctors with training, qualifications and expertise in homeopathy, but by those who control the process of referrals, and research suggests that most decision-makers in Primary Care Trusts (PCTs) are not qualified to assess homeopathic research and practice.[18] The CS&TC report and the new BMA policy provide, therefore, a basis for increasingly serious restrictions of public access to homeopathy in the UK as a result of their influence on inadequately qualified PCT decision-makers. Those who would be affected most immediately are patients for whom homeopathy has proved to be the only treatment to help their condition, and who cannot afford to pay for medical treatment.[19,20] In this context it is worth noting that although Brent teaching PCT axed referrals

to the RLHH in 2007, many of the patients affected have had their treatment reinstated after appeals on individual basis.[21]

Homeopathy has been in the NHS since it was founded, so it is reasonable to wonder why these attacks are happening now. Unfortunately this question cannot be answered with any certainty. It is possible, however, to put these attacks into context, and to assess how reliable the arguments are. In doing so, it becomes clear that the attacks are not spontaneous, but part of a longer campaign; that the pharmaceutical industry has a vested interest in the success of this campaign; and that it has supported the key organisation promoting this campaign. For this reason, before looking at the report itself, I will analyse the actions and membership of the committee, and provide some background on the use of homeopathy and on the organisation leading the attacks.

The Process of Gathering the Evidence

The CS&TC's conclusions cannot be justified by any claim that they are the result of a long, thorough and scientific research programme. Indeed, the very subject of their inquiry was not clearly defined. The justification for the whole series of the committee's 'evidence checks' was the alleged need "to assess the Government's use of evidence in policy-making".[22] However, having written to the Government about evidence for "the licensing of homeopathic products by the MHRA" (Medicines and Healthcare products Regulatory Agency),[23] the CS&TC then broadened its call for written evidence to include:

- Government policy on licensing of homeopathic products;
- Government policy on the funding of homeopathy through the NHS
- the evidence base on homeopathic products and services.[24]

The committee allowed only 2 weeks for written evidence to be submitted,[25] but it still received 56 written submissions, many of them detailing wide-ranging evidence for homeopathy and important theoretical issues. It also received a number of supplementary submissions, some of which were also published.

Having already altered its original subject of inquiry, the CS&TC then continued to be equivocal about its intentions. Because the majority of the questions at the hearings had turned on the issue of whether homeopathy works or not, at the third hearing of oral evidence the Chair considered it necessary to state that "this is not an enquiry into whether homeopathy works or not". Nonetheless

he then almost immediately asked: “Does the Government have any credible evidence that homeopathy works beyond the placebo effect”.[26] The final report is almost entirely oriented on the question of whether homeopathy works or not, so an inquiry which originally claimed to be gathering information about a specific piece of legislation became a general inquiry into the therapeutic validity of homeopathy, but only *after* evidence had been submitted on particular issues.

The CS&TC called only twelve people to give oral evidence. Of these, nine represented an orthodox medical perspective, with six of them coming from the Department of Health, the MHRA, Boots, the Royal Pharmaceutical Society of Great Britain and a Primary Care Trust which closed a homeopathic hospital.[27] The other three of this group appeared to have no justification for being called other than that they are associated with very public opposition to homeopathy: Tracey Brown, Professor Edzard Ernst, and Dr Ben Goldacre. Only the remaining three people could be said to fully understand homeopathy, representing the Royal London Homeopathic Hospital, the British Homeopathic Association (for NHS homeopaths) and the British Association of Homeopathic Manufacturers.[28] Nobody was called to give evidence from the largest body registering homeopaths in the UK, the Society of Homeopaths, or to represent patients themselves. Given that the CS&TC broadened its inquiry from looking at the government policy on the licensing of homeopathic medicines to questioning the whole validity of homeopathy, it is wholly unacceptable that it did not also broaden its sources of oral evidence.

If the CS&TC’s approach to gathering evidence appears inappropriate, confused, unscientific, and biased towards the orthodox medical perspective, its faults become glaringly obvious when it is compared with that employed by the House of Lords Science and Technology Committee during its inquiry into complementary and alternative medicine in 2000.[29] Such a comparison makes it abundantly clear that no attempt was being made by the CS&TC to be thorough, informed or fair.

The Committee Membership

If the CS&TC’s process of gathering evidence appears deficient, the composition of the committee which actually heard and decided on this evidence is a further matter for concern, since it offers a possible explanation for the deficiencies. Out of a Parliamentary committee of 14 members, only six attended any of the hearings, and the final report was supported by *only three* of them, with another member opposing (Ian Stewart), and two not voting (Phil Willis and Tim Boswell).[30] The three MPs voting for the report have an interesting relationship to the process of its production:

- Ian Cawsey was not even a member of the committee at the time evidence was heard.
[31]
- Doug Naysmith did not attend any of the hearings,[32] and he had been a member of the Parliamentary All Party Pharmacy Group,[33] which aims “To raise awareness of the profession of pharmacy, and to promote pharmacists’ current and potential contribution to the health of the nation”.[34] Prior to being an MP he had been involved in pharmaceutical research, including working as an immunologist at Beechams Laboratories.[35]
- Evan Harris has received support to attend conferences from pharmaceutical companies and is a member of the International Medical Parliamentarian Organization (IMPO).[36] The IMPO does not have a website, and it is difficult to find any information about it, although it was apparently founded in 1994.[37] Harris has also received support from Sense About Science, and since losing his Parliamentary seat he has been invited to join its Advisory Council.[38] He has publicly shown a vigorous opposition to homeopathy.[39]

Clearly the views of these members do not represent a secure basis for a radical revision of government and NHS policy on homeopathy.

Background

Homeopathy was specifically included in the NHS by Aneurin Bevan sixty years ago. Today 10% of people in the UK use homeopathy each year,[40] although most of them have to pay for it privately, because the NHS provision has been increasingly reduced by a deficiency of training within the NHS,[41] and by Primary Care Trusts withdrawing funding for homeopathic treatment. The *total* spending by the NHS on homeopathy is currently less than £12m (including personnel and premises), of which £152,000 is spent on medicines.[42] NHS spending on medicines as a whole is £11bn,[43] of which about £2bn is spent on treating

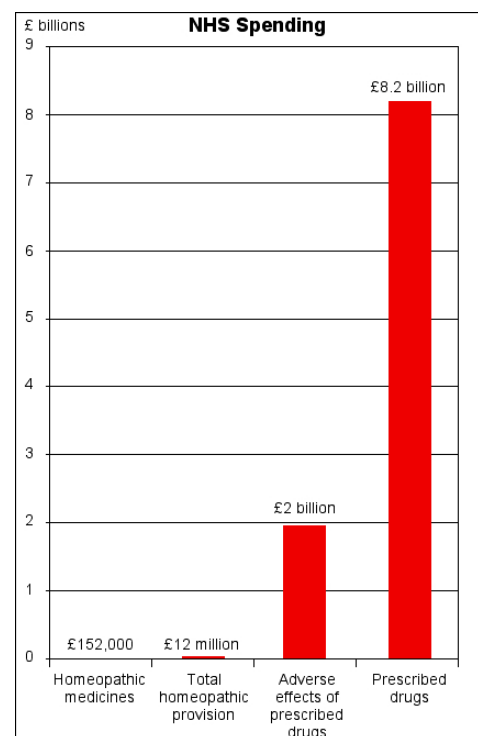


Figure 1: Comparison of NHS spending on homeopathy and pharmaceutical drugs

the adverse effects of *prescribed* drugs.[44] In other words a saving of 0.6% of the spending on just these adverse effects would pay for the whole current NHS budget for homeopathy (see Figure 1).

Around the world homeopathy is recognised more or less officially as part of medical practice in Europe (Austria, Belgium, Bulgaria, France, Germany, Hungary, Italy, Latvia, Lithuania, Portugal, Romania, Russia, Slovenia, Spain, Switzerland and the UK), in Central and South America (Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador and Mexico) and in Asia (India, Pakistan and Sri Lanka). As in the UK, in Brazil, India, Mexico, Pakistan and Sri Lanka homeopathy is integrated into the national healthcare system.[45] No evidence was sought from countries outside the UK, though written evidence included references to studies conducted in them.

One country significantly absent from this list is the USA, where the first national medical association was a homeopathic one, the American Institute of Homeopathy, founded in 1844.[46] The American Medical Association, founded in response to this in 1847,[47] pursued a highly aggressive strategy against homeopaths, culminating in league tables of medical colleges which favoured orthodox colleges over homeopathic ones.[48] Homeopathy almost disappeared there, and the USA currently has the largest spending on pharmaceuticals of any country in the world. In 2006 it stood at \$216.7bn (£148.9bn),[49] approximately one third of the the pharmaceutical industry's global sales of \$643bn (£435bn) per year.[50]

Sense About Science

In the last few years the campaign against homeopathy in the UK has been spearheaded by an organisation called Sense About Science. Registered as a charity in 2005, Sense About Science has been funded by the oil and pharmaceutical industries ever since.[51] George Monbiot has written about how this organisation originated with members of the former Revolutionary Communist Party and their later manifestation around the journal *Living Marxism* (or *LM*).[52] He notes that “Its participants have taken on key roles in the formal infrastructure of public communication used by the science and medical establishment.” As has been pointed out above, CS&TC member Evan Harris is closely connected with Sense About Science.

Tracey Brown, the current Managing Director of Sense About Science, has a background in the pharmaceutical industry. Monbiot specifically mentioned her, referring to her “working for the PR firm Regester Larkin, which defends companies such as the biotech giants Aventis CropScience,

Bayer and Pfizer against consumer and environmental campaigners”. She was one of three people called to give oral evidence to the CS&TC, despite their lack of qualifications in homeopathy and their lack of any role in the NHS provision of homeopathy. A second person was Edzard Ernst, who has co-authored a book with Simon Singh, a member of the Board of Trustees of Sense About Science. They claimed that this book, which attacked homeopathy, offered “an unparalleled level of rigour, authority and independence”,^[53] but elsewhere I have shown that “Ernst and Singh reveal a profound ignorance of their subject and a serious bias against alternative medicine”.^[54] The third person, Ben Goldacre, has used Ernst’s work and opinions to justify his own attacks on homeopathy.^[55]

In its written submission to the CS&TC, Sense About Science showed that it has been the supporter of a series of high-profile attacks on homeopathy over the last few years:^[56]

1. In 2006 and 2007 letters were sent to every Primary Care Trust advocating that they stop funding homeopathy. These letters did not reflect NHS policy, and the 2007 letter was specifically criticised by the Department of health

... because it carried the NHS logo. We would like to clarify that this document was not issued with the knowledge or approval of the Department of Health and that the use of the National Health Service logo was inappropriate in this instance.^[57]

No action was taken against these signatories for using official stationery to express their privately held views.^[58]

2. In July 2006 Sense About Science organised a ‘sting’ operation around advice about malaria prevention. They then repeated the operation with a BBC *Newsnight* crew. They alleged that those selected were chosen at random, though no information was given about the randomisation process. They did not appear to target registered homeopaths, and no complaints were brought against any homeopaths. Nonetheless, this stunt continues to provide a basis for generalised allegations of malpractice by homeopaths.
3. In 2009 Voice of Young Science (an off-shoot of Sense About Science) attempted to promote a claim that the World Health Organization (WHO) was against the use of homeopathy. It

turned out that they had conflated a number of letters from individuals and presented this as an official statement of WHO policy.

In 2007 Homeopathy: Medicine for the 21st Century (H:MC21) was established on the premise that the attacks on homeopathy were part of a propaganda campaign aimed at the removal of homeopathic treatment from the NHS. H:MC21 considered that the opponents of homeopathy were using a similar technique to that which marginalised homeopathy in the USA 100 years ago, in that they were claiming scientific objectivity whilst deliberately applying an inappropriate measure. H:MC21 believed that this goal had been chosen because, if successful, it would enable opponents of homeopathy around the world to ignore questions of scientific evidence, and to justify their views by simply arguing that “If homeopathy worked, it would still be in the NHS”. The strong involvement of Sense About Science in the CS&TC *Evidence Check* and the subsequent attacks on homeopathy by the PSNI and the BMA junior doctors suggest that this analysis is correct, and that the *Evidence Check* is actually part of a propaganda campaign rather than a legitimate investigation into the scientific facts.

Evidence-based Medicine

Against this background, any failure of the report to abide by good scientific standards becomes highly significant, and, in practice, it not only ignores or misrepresents the evidence supplied but even redefines the basic principles on which its argument is based. For example, the CS&TC report states that

We welcome the Government’s acknowledgement that there is no credible evidence of efficacy for homeopathy, which is an evidence-based view. However, the Government’s view has not translated into evidence-based policies.[59]

This is a reference to the approach known as evidence-based medicine (EBM) which has achieved dominance since 1945, and which is best known for its use of the randomised controlled trial (RCT) to provide information about the safety and efficacy of drugs. Such trials were more widely used after “the 1960-1961 tragedy of thalidomide, when 10,000 women in Europe, Asia, and the United States gave birth to deformed babies through taking an apparently innocent sleeping pill during pregnancy”. [60]

It is of crucial importance that (my emphases)

The practice of evidence based medicine means integrating *individual clinical expertise* with the best available *external clinical evidence* from systematic research.[61]

Quite simply, EBM specifically *excludes* reliance on RCTs alone on the grounds that this evidence is insufficient and must be integrated with evidence from clinical practice. Thus,

After the advent of the clinical trial, doctors could choose their treatment for a single patient by examining the evidence from several trials, perhaps involving thousands of patients. There was still no guarantee that a treatment that had succeeded during a set of trials would cure a particular patient ...[62]

The reason for this is that whilst RCTs look for specific effects in specific circumstances (efficacy), experience of the use of treatments in real-life populations over the longer term reveals the range of actual beneficial and harmful effects on individuals (effectiveness). Furthermore, it is the evidence from clinical practice which can lead to treatments being withdrawn even though they have previously passed trials for efficacy. Thus in orthodox medicine evidence from clinical practice supersedes evidence from RCTs, though RCTs may be used to confirm these findings.

In contrast, the CS&TC report argues that the *only* evidence which can determine whether homeopathy works or not is that from RCTs. This position involves a fundamental rejection of the principles of EBM and would have far-reaching consequences if applied to medicine generally, since it devalues the need for constant monitoring of the effects of medicines in clinical practice. The committee's argument is entirely abstract, has no supporting evidence, and equates a medicine which does 'not work' because of its side effects with a placebo. The key point of the argument is then summed up in a logic table (Figure 2), but what this table states is that a test of efficacy has no relevance to effectiveness in the real world, where treatments are actually used. In other words, the report is simultaneously claiming that RCTs are unable to assess whether homeopathy works or not, and that only RCTs can assess whether homeopathy works or not!

	Efficacy	Effectiveness
Homeopathy is not a placebo	PASS	EITHER PASS OR FAIL
Homeopathy is a placebo	FAIL	

Figure 2: A summary of the logical outcomes depending on whether homeopathy is or is not a placebo

Source: Para. 28, *Evidence Check 2: Homeopathy*, p.9

Randomised Controlled Trials

The explanation for this logical contradiction lies (as always) in an error in the premise on which it is based. There is a popular misconception, fostered by opponents of homeopathy, that RCTs are sufficient in themselves as a test of any treatment, and that they are abstract arbiters of truth. This is

scientifically incorrect, since the RCT is simply a tool, and what it tests depends entirely on what you are asking it to test. For example,

Viagra, one of the most successful drug discoveries in recent years, was originally developed to treat angina, but a pilot study showed that it did little to alleviate this condition. However, when researchers decided to stop the trial early and recall any unused pills, they were perplexed by the reluctance of the trial volunteers to return them. Subsequent interviews revealed that Viagra had an unexpected and desirable side-effect. Further trials and safety tests have resulted in Viagra's current widespread availability for the treatment of impotence.[63]

Throughout these tests the *total* action of Viagra did not change, but its *efficacy* changed as a result of simply redefining which part of that action was to be considered beneficial. In other words, the definition of efficacy in an RCT is arbitrary, not absolute, and so not scientifically valid beyond the specific limits of the trial. What this means in practice is that homeopathy may be effective in an environment where its *total* action is measured, but inefficacious in an RCT where an irrelevant *specific* effect is being measured.

This is not a hypothetical issue. For example, in one supposed trial of the homeopathic use of *Arnica*, subsequent analysis revealed that the only person for whom *Arnica* was an appropriate treatment was in the placebo arm of the trial.[64] In this case, failure to take significant factors into account meant that the homeopathic action of *Arnica* was not being tested, and that the specific effect being measured was irrelevant to homeopathy. In fact, the confusing and contradictory nature of the RCT evidence of the *efficacy* of homeopathic treatment can easily be explained by such failures to design RCTs correctly to test homeopathic treatment.[65] On the other hand, there is consistent evidence of the *effectiveness* of homeopathic treatment in the real world, as I show below. Clearly RCTs need to be studied carefully for their application of the principles of homeopathy, but this crucial issue is never addressed by the CS&TC.

Meta-analyses

The CS&TC further compounds this error by basing its conclusions not on the primary evidence of RCTs, but on the secondary evidence of systematic reviews and meta-analyses.[66] These are analytical tools intended to combine trials involving small numbers of subjects in order to generate a larger evidence-base. When used to combine trials of a specific orthodox treatment, they legitimately amplify the information, but when used to combine trials of homeopathic treatment, they exhibit two major problems.

The most obvious problem with systematic reviews and meta-analyses is that if the original trials were not correctly designed to test a homeopathic treatment, then analyses based on these trials will simply duplicate the errors (the ‘garbage in, garbage out’ principle). In practice there is no attempt to remove trials with such methodological errors, and the analyses simply select trials on the basis of size and the rigour with which they apply randomisation and blinding, as measured by scoring systems such as the Jadad scale. They do *not* select trials according to the rigour with which they apply homeopathic principles. In addition, there is frequently a refusal even to recognise this as an issue.

An example of this can be seen in the work of Ben Goldacre, who made statements to the CS&TC which appear to contradict those in his book *Bad Science*. Thus the report quotes him as stating that

There have now been around 200 trials of homeopathy against placebo sugar pills and, taken collectively, they show that there is no evidence that homeopathy pills are any better than a placebo. [67]

In the same session Goldacre was explicit that (my emphasis)

what you see when you look at *the best quality trials* is that homeopathy pills work no better than placebo pills.[68]

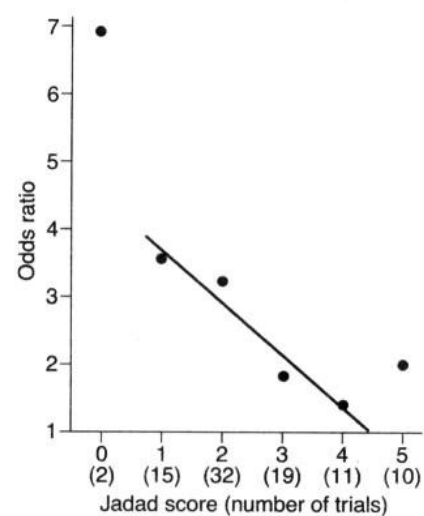


Figure 3: Graph of homeopathy trials against Jadad scores

Source: Goldacre, *Bad Science*, p. 53

However, in his book *Bad Science* he discusses a graph (Figure 3) and notes that (my emphasis)

That little dot on the right-hand edge of the graph, representing *the ten best-quality trials*, with the highest Jadad scores, stands clearly outside the trend of all the others. This is an anomalous finding: suddenly, only at that end of the graph, there are some good-quality trials bucking the trend and *showing that homeopathy is better than placebo*. [69]

His opinion is that

some of the papers making up that spot are a stitch-up. I don't know which ones, how it happened, or who did it, in which of the ten papers, but that's what I think.[70]

However, two important facts raise doubts about this opinion. Firstly, Goldacre's subsequent quotation from Ernst reveals that his opinion arises not from the evidence itself, but from the *initial premise* that “homeopathic remedies are in every way identical to placebos”. [71] Secondly the trend

line *excludes* the odds ratios for the Jadad scores of 0 and 5, and so it represents only a partial view of the evidence.

A plausible alternative view, based on the same evidence but taking into account the complexities of adapting the RCT to homeopathic treatment, is that it is only in these “best-quality trials” that both the standards of blinding, randomisation and reporting have been met *and* the necessary homeopathic standards. The probability that this is the case is high since these are the “best quality” trials. On this basis, the *anomaly* is actually the genuine expression of homeopathic efficacy and shows that RCT evidence can be brought into line with the other evidence available.

This example also indicates a second problem with systematic reviews and meta-analyses, in that the method of selection adds a significant degree of subjectivity to the process, and leads to continual debate about each analysis.[72] Several reviews and meta-analyses referred to by the committee are the subject of conflicting views, including disagreement about their conclusions. [73,74,75,76,77] In particular, the meta-analysis regarded by the CS&TC as “the most comprehensive to date”, [78] Shang et al., [79] has been the subject of sustained criticism, even within orthodox medical circles, in part because *The Lancet* published it despite the fact that it breached the journal’s own guidelines for such research.[80,81,82,83] Nonetheless, The CS&TC report claims that (my emphasis)

the systematic reviews and meta-analyses *conclusively* demonstrate that homeopathic products perform no better than placebos.[84]

In the context of the issues discussed above, such a conclusion is wholly unsupported by the facts.

Evidence from Clinical Practice

I have already pointed out how the CS&TC specifically excludes evidence from clinical practice, yet this evidence is strongly and consistently supportive of the effectiveness of homeopathy. Within the NHS studies of different sizes have shown that 70% of patients treated with homeopathy see improvement,[85,86,87] and these results have been confirmed by studies in other countries.[88,89] These studies are important because they measure the general response to individualised treatment, which RCTs do not. Furthermore, referral to a homeopathic hospital in the NHS is highly unlikely to be the first treatment choice. Indeed it is often known as TEETH (tried everything else, try homeopathy). This improvement rate is highly significant, therefore, since it tends to be among

those who have *failed* to recover using orthodox medical treatment, and so are less likely to be exhibiting the placebo effect.

The recent use of homeopathy for immunisation in Cuba has also produced dramatic results. The government was faced with a rising rate of infection and death from annual epidemics of *leptospirosis*, but it could no longer afford to vaccinate even those most at risk. As a result a homeopathic immunisation program was developed and initially used in two regions and treating 2.4 million people. The result was that in only two weeks the rate of infection was cut by 80% and the death-rate among hospitalised patients was cut to zero.[90] The rate of infection has remained at minimal levels ever since, and the Cuban laboratory which had originally developed the vaccine now only produces the homeopathic treatment. Despite the significance of this trial of homeopathic immunisation, the results of which have been presented at two conferences (in Cuba and Canada), the Cuban doctors are apparently having difficulty in getting their data published in an international medical journal.

It should be noted that the committee was also alerted to historical evidence of homeopathy's success in epidemics and clinical practice and of attempts to conceal such evidence.[91,92] One prominent example, included in the evidence given to the CS&TC, is the cholera epidemic in London in 1854, the details of which were fully recorded. In fact, they were discussed in Parliament as a result of the strenuous attempts made at the time to suppress the results from the London Homoeopathic Hospital on the grounds they were dramatically better than any other hospital in London, including the neighbouring ones.[93] Even today opponents of homeopathy have continued to make spurious and unsupported claims that “when patients at the London Homoeopathic Hospital had a survival rate of 84 per cent”, this could be attributed to the failure of orthodox medicine, and differences in the wealth of patients or in the cleanliness of the hospitals. [94] In fact, the mortality rate for cholera without treatment is around 50-60% (the average rate at the orthodox hospitals in London), and a rate of 16% can only be achieved through successful treatment.[95] In the light of these historical and contemporary accounts, the report's exclusion of evidence from clinical practice of homeopathy is extraordinary and perverse.

Laboratory Evidence

The CS&TC report insists that the effectiveness of homeopathy in clinical practice is entirely due to the placebo effect. The report does not explain, however, that this term is the *name* given to those

effects which occur after a person has received a treatment believed to be inert; it is not a defined *process*, and there is no scientific explanation for it.[96] In the case of the potentised substances generally used by homeopaths, laboratory experiments have shown that they are biologically active. Indeed there is some excellent, multi-centre, replicated evidence that they act differently from the same substances merely diluted.[97] In other words, the medicines used by homeopaths are not by definition inert, though their effects may depend on their being used correctly.

This laboratory evidence was simply ignored by the committee. Instead they considered only the question of whether there is an *explanation* for potentised substances being biologically active. They then claimed that the selected explanations are implausible, and so research into the effects of potentised substances should not be funded.[98] This is an extraordinary position to take, since the normal process of scientific advance is to explore anomalous results (especially those occurring in high quality experiments) and then develop theoretical explanations. To suggest that a theoretical breakthrough has to *precede* the process of discovery of evidence for it is bizarre, but this is not the first time that those opposed to homeopathy have used this argument.[99]

Conclusion

This article has looked at several issues around the *Evidence Check: Homeopathy*, and shown that the CS&TC has only paid lip-service to the principles of systematic enquiry, whilst repeatedly exhibiting the use of double-standards.

- The committee has claimed to apply an evidence-based approach, but has actually rejected the principles of evidence-based medicine by ignoring clinical and laboratory evidence and presenting RCTs as the only valid source of evidence. It has failed to consider either the complex issues surrounding RCTs or the related issues and controversy surrounding systemic reviews and meta-analyses of RCTs.
- Although the committee was allegedly focussed on examining the evidence base, important evidence was excluded on the basis that it lacked a “plausible” explanation.
- The committee redefined the subject of its inquiry *during* and *after* the process of gathering evidence, and the people it selected to provide oral evidence

overwhelmingly reflected the orthodox view of medicine or even antagonism towards homeopathy.

- The report was supported by *only three* MPs (less than 22% of the members of the committee), and of these, the only one who was involved in the gathering of oral evidence is vehemently opposed to homeopathy, and he and one of the others have had links to the pharmaceutical industry.
- The committee claimed to be scrutinising the actions of the government, yet it allowed very little time for gathering the evidence, and the timing of the publication of the report seriously reduced the likelihood of its own report being scrutinised by Parliament.

The committee also expressed conclusions which are a threat to good practice in science and medicine, since they reflect double standards in the application of the RCT:

- The committee asserted that RCT evidence alone is sufficient to test a homeopathic treatment, whereas it is not sufficient for an orthodox drug treatment.
- The committee considered that the failure of some ‘homeopathic treatments’ to pass an RCT invalidates homeopathy as a therapy, whereas the similar failure of orthodox drugs does not invalidate orthodox drug therapy.
- The committee argued that homeopathic treatments should not be used or investigated because they have not been proven efficacious by RCT, whereas only 11% of 2,500 orthodox “commonly used treatments” have been proven “beneficial”, and only 23% have been proven “likely to be beneficial”, whilst 51% are of “unknown effectiveness” (see Figure 4).[100]

The profoundly flawed process and conclusions of the CS&TC appeared to be aimed at stopping the NHS spending less than 0.01% of its budget on homeopathy. At the same time, such measures would hand a virtual monopoly of healthcare in this country to the pharmaceutical industry, whose products are so problematic that the NHS spends around 2% of its annual budget on treating their

adverse effects. Quite simply, this makes no sense ... unless, of course, homeopathy does actually work, does offer a cheap, scientific and effective alternative to drugs, and is a real threat to the pharmaceutical industry. Whether or not you believe that this is the case, one thing is certain: the evidence from the USA shows that only the shareholders of pharmaceutical companies will benefit from removing a patient's right to choose something other than

drug treatments. Before we let that choice be eliminated we need to be absolutely sure that the justification is arrived at honestly and scientifically. The Commons Science and Technology Committee's *Evidence Check 2: Homeopathy* shows no signs of being such a justification.

William Alderson is writing in a personal capacity. He is Chair of the charity Homeopathy: Medicine for the 21st Century (H:MC21) and an elected member of the Board of Directors of the Society of Homeopaths.

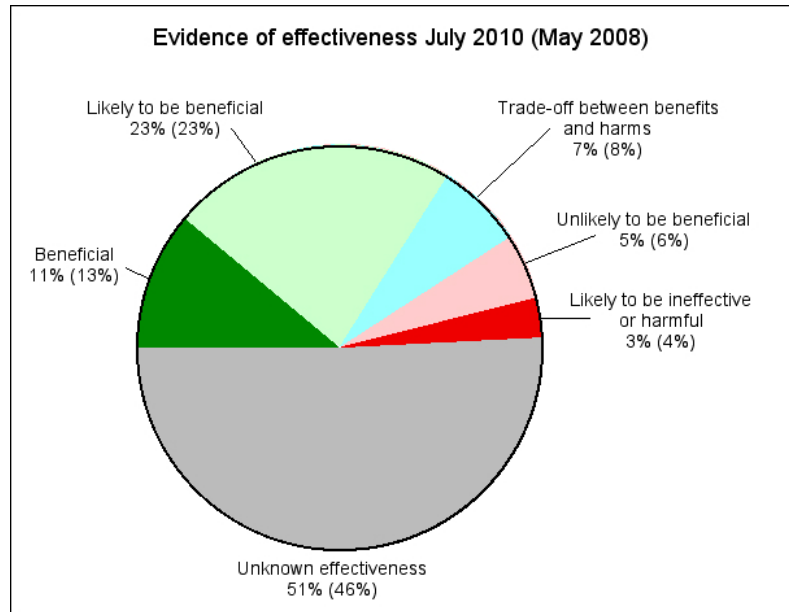


Figure 4: Chart of evidence of effectiveness for 2,500 most commonly used treatments in the NHS, 2010 (with 2008 figures for comparison)

Source: BMJ Clinical Evidence [100]

Notes

1 House of Commons Science and Technology Committee, *Evidence Check 2: Homeopathy* (London: The Stationery Office Limited, 2010), pp. 28-29.

2 Para. 77, *Evidence Check*, p. 21.

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 Professor Gustav Born FRS Emeritus Professor of Pharmacology, Kings College London
 and
 Professor Michael Baum Emeritus Professor of Surgery, University College London
 Professor David Colquhoun FRS University College London
 Professor Edzard Ernst Peninsula Medical School, Exeter
 Professor John Garrow Emeritus Professor of Human Nutrition, London
 Mr Leslie Rose Consultant Clinical Scientist
 Professor Raymond Tallis Emeritus Professor of Geriatric Medicine, University of Manchester
 Mrs Hazel Thornton, Hon. DSc. (Leicester) Honorary Visiting Fellow, Department of Health Sciences,
 University of Leicester
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