1. General points

1.1. The practice of homeopathy as a medical system is legal in this country.

1.2. Homeopathy was included in the NHS when it was founded, and is still part of the NHS after 60 years.

1.3. The status of homeopathy as a legally practised system of medicine and as a part of the NHS was restated by the government this year (2010). Attached as "DoH Response".

1.4. Homeopathy is, therefore, not a 'new product', and so it does not need to provide new evidence in order to advertise itself as a medical system, though the law does require new evidence for any claim that a specific medicine can treat a specific disease (a point not appropriate in this case).

1.5. H:MC21 is a charity established to pursue the following objects:

> "The Charity's objects (the Objects) are to advance the education of the public in the subject of homeopathy through:
>
> (1) research into
>
> (a) the extent of use of homeopathic treatment;
>
> (b) the range of outcomes of use of homeopathic treatment;
>
> (c) the level of public interest in the use of homeopathy;
>
> (2) publication of such research
>
> (a) conducted by the Charity;
>
> (b) conducted by others;
>
> (3) campaigning for increased levels of research and use of homeopathy."

1.6. The publication of information which advances the public's knowledge of homeopathy as a medical system is legally acceptable and a fulfillment of H:MC21's objects.

1.7. As part of "campaigning for increased levels of research and use of homeopathy" it is necessary to expose and confront the barriers to such increases.

1.8. The publication of information which advances the public's knowledge of the barriers to wider use of homeopathy as a medical system is legally acceptable and a fulfillment of H:MC21's objects.

2. Structure of the advertisement

2.1. The advertisement was intended to promote our charity, its aims, and its approach, and so it involved several elements.

2.1.1. Our name, logo and contact details.

2.1.2. A summary and photograph outlining some key activities, including:

2.1.2.1. Representing homeopaths and patients.

2.1.2.2. Organising public expressions of the views of patients and homeopaths, such as:

2.1.2.2.1. By collecting signatures

2.1.2.2.2. By lobbying Parliament

2.1.2.3. Analysing the arguments used against homeopathy and publishing these critiques.

2.1.3. Our beliefs and aims, including:

2.1.3.1. That homeopathy should be better integrated into the NHS.

2.1.3.2. That such integration should be monitored, in order:

2.1.3.2.1. To protect patients.

2.1.3.2.2. To assess accurately the levels of benefit homeopathy can offer the NHS.

2.1.4. The conclusions on which our beliefs and aims are based, comprising the headings and the unreferenced statement beginning "Even a small increase …" , namely:

2.1.4.1. That there is evidence of homeopathy's ability to significantly benefit patients.

2.1.4.2. That there is a need for an alternative to conventional medical treatment.

2.1.4.3. That the greater integration of homeopathy into the NHS could meet this need.

2.1.4.4. That the opposition to the use of homeopathy in an integrated NHS is suspect.

2.1.5. The evidence on which these conclusions are based, comprising a set of statements of fact which summarise some key points of our argument.

2.1.5.1. These facts are fully referenced so that they are verifiable by readers.

2.1.5.2. These facts come from reliable sources.

2.1.5.3. These facts are illustrative, rather than comprehensive.

2.1.5.4. These facts achieve additional informative value by being linked together.

2.2. It would appear that the complaints we are addressing seek to atomise the coherence of this advertisement and attribute different roles to some elements from those they actually perform.

2.2.1. One heading is treated as an unsubstantiated statement of fact, rather than as a conclusion arising from facts such as those provided (complaint 1).

2.2.2. There appears to be a demand that three sourced facts be substantiated beyond their sources (complaints 2 to 4).

2.2.3. One conclusion is treated as a misleading statement of fact, rather than as a conclusion arising from the facts provided (complaint 7).

2.2.4. Four sourced facts are alleged to be misleading, even though they have been previously published without any challenge, and are used solely as elements in an argument, rather than as independent statements in their own right (complaints 5, 6, 8 and 9).

2.2.5. One conclusion is alleged to be an irresponsible or denigratory statement, as if it were an independent statement rather than as a conclusion arising from the facts provided (complaint 11).

2.2.6. Three sourced facts are alleged to be irresponsible or denigratory, when they are repetitions of information which has been previously published without any challenge (complaints 10, 12 and 13).

2.3. On the basis of this analysis we suggest that the complaints are an attempt to prevent the publication of certain facts *because* they are in a context where conclusions can be drawn from them.

2.4. We, therefore, believe that our response must contain a considerably fuller presentation of the context of this advertisement than might have been expected, in order that the significance of the selected facts and the conclusions drawn from them can be understood and appreciated.

3. Evidence-based medicine

3.1. You state that "the ASA /CAP has yet to see significant medical evidence for the efficacy of homeopathy" and that we "are advised that the substantiation required for points 1-4 would have to be both significant and robust".

3.2. The dominant paradigm in orthodox medicine is the approach known as 'evidence-based medicine' (EBM). A key document explaining this approach is attached as "Sackett".

3.2.1. According to the approach of EBM, evidence of efficacy is insufficient, and must be assessed together with evidence of effectiveness to have any validity.

3.2.1.1. "Good doctors use both individual clinical expertise and the best available external evidence, and neither alone is enough. Without clinical expertise, practice risks becoming tyrannised by evidence, for even excellent external evidence may be inapplicable to or inappropriate for an individual patient." [David L. Sackett, William M.C. Rosenberg, J.A. Muir Gray, R. Brian Haynes, W. Scott Richardson, 'Evidence based medicine: what it is and what it isn't', *BMJ*, 312 (1996), 71-72.] See "Sackett".

3.2.2. Reliance on "evidence for the efficacy of homeopathy" is therefore unjustifiable within the EBM paradigm.

3.2.3. If the ASA/CAP are using some other paradigm, we require information about this and about its scientific validity.

3.2.4. EBM is an attempt to address the problem of establishing what treatment may be appropriate for a particular individual in an absence of a scientific theory of health and disease:

3.2.4.1. "Clinical practice must not be regarded as applied biological medicine, *and it is necessary to adopt the empiricist approach for the solution of clinical problems*." [Henrik R. Wulff, Stig Andur Pedersen & Raben Rosenberg, *Philosophy of Medicine: An introduction* (Oxford: Blackwell Scientific Publications, 1986), p. 43.] Original attached as "Wulff p43".

3.3. The disease process is unique to an individual, though the signs, symptoms and aetiology may closely resemble those in other individuals:

3.3.1. "Doctors have studied millions of sick people, and we must imagine that no two of these were ever completely identical as regards their clinical pictures and the underlying causal mechanisms, but in order to build up a medical science, it was essential to stress the similarities rather than the differences." [Henrik R. Wulff, Stig Andur Pedersen & Raben Rosenberg, *Philosophy of medicine: an introduction* (Oxford: Blackwell Scientific Publications, 1986), p. 77.] Original attached as "Wulff p77".

3.3.2. The hypothesis that "in order to build up a medical science, it was essential to stress the similarities rather than the differences" is unproven (and would appear to be unprovable).

3.3.3. Therefore, testing medicines in RCTs on the basis of such generalised definitions of disease is not scientifically well-founded and can at best only provide approximations of efficacy.

3.3.4. The curative process is unique to an individual, though the reaction to a particular treatment may closely resemble that in other individuals.

3.3.4.1. "even excellent external evidence may be inapplicable to or inappropriate for an individual patient." See "Sackett".

3.3.5. Therefore, testing medicines in RCTs on the basis of generalised definitions of outcome can at best only provide approximations of efficacy.

3.3.6. The full range of the effects of medicines on individuals in clinical practice provides more detailed evidence of the real effectiveness of the treatment; is the evidence which informs "clinical expertise"; and is the evidence which can trigger the withdrawal of a medicine supposedly proven efficacious in RCTs.

3.3.7. To advocate reliance on proof of efficacy is dangerous to public welfare, as it undermines the importance of gathering evidence from clinical practice.

4. The science of medicine

4.1. The only scientifically absolute definition of disease is the totality of the actual signs, symptoms and aetiology in the individual patient.

4.1.1. Anything less than this may appear to be a convenient construct, but EBM confirms that a definition of illness which does not recognise the patient's individuality has no absolute scientific validity.

4.2. The only scientifically absolute definition of the action of a medicine is the unique totality of its effects on human beings.

4.2.1. The division of these effects into categories of "beneficial effects" and "side effects" may appear convenient, but it is arbitrary and has no absolute scientific validity:

4.2.1.1. "Whether a particular drug action is called a side effect or a desired effect depends on why the drug is being taken." [Robert Berkow M.D. (Editor in Chief), *Merck Manual of Medical Information* (New York: Simon and Schuster, 2000, p. 26] Attached as "Merck Effects".

4.3. A science of medicine must relate these two absolute bodies of information to each other in such a way as to provide a clear connection between the total action of individual medicines and the totality of the signs, symptoms and aetiology of individual patients.

4.3.1. The denial that there can be any general connection between these two scientifically absolute bodies of information is a denial that there can be a general science of medicine.

4.3.1.1. In this case there can be no claim of unique scientific validity for any medical approach, since all approaches are equally arbitrary.

4.3.2. The hypothesis that the relationship between these two scientifically absolute bodies of information is one of opposition is theoretically and demonstrably invalid.

4.3.2.1. Many signs and symptoms have no opposites, but are either present or absent (e.g. a cough, spots, a headache), so it is theoretically impossible for a medicine to produce effects which are the opposite of these signs and symptoms.

4.3.2.2. The use of medicines which counter the action of symptoms in the body has a history of "rebound effects". Examples include those in the attached documents "BNF Rebound 01" to "BNF Rebound 18".

4.3.2.3. Rebound effects are consistent with the fact that the human body is a homeostatic organism (see 4.3.3.3 below).

4.3.2.4. There can be no justification for a science of medicine based on the hypothesis of opposition.

4.3.3. The hypothesis that the relationship between these two scientifically absolute bodies of information is one of similarity is theoretically and demonstrably valid.

4.3.3.1. Many substances are capable of producing signs and symptoms similar to those caused by other substances or disease agents, so a relationship of similarity is theoretically possible.

4.3.3.2. The development of vaccination, the use of desensitisation in treatment of allergies, and the use of drugs such as digitalis for heart failure or ritalin for hyperactivity disorder, all demonstrate that in practice a relationship of similarity can be effective:

4.3.3.2.1. "It can sometimes be difficult to distinguish between toxic effects and clinical deterioration because symptoms of both are similar." ['2.1.1 Cardiac glycosides', British National Formulary (online), 2010.] Original attached as "BNF Digitalis 1" and see also "BNF Digitalis 2".

4.3.3.2.2. "the theraputic dose is dangerously close to the lethal dose" ['Digitalis purpurea (Foxglove)', Cornell University website.] Original attached as "Digitalis Toxicity".

4.3.3.2.3. "CNS stimulants should be prescribed for children with severe and persistent symptoms of attention deficit hyperactivity disorder (ADHD)" ['4.4 CNS stimulants and drugs used for attention deficit hyperactivity disorder', British National Formulary (online), 2010.] Original attached as "BNF Ritalin 1" and see also "BNF Ritalin 2".

4.3.3.3. The homeostatic nature of the human organism means that it will react against any stimulus which threatens to change function to exceed its 'normal' limits.

4.3.3.3.1. If a stimulus produces effects counter to those of existing signs and symptoms, the reaction will tend to reinforce those existing conditions (the 'rebound effect').

4.3.3.3.2. If a stimulus produces effects which mimic existing signs and symptoms, the reaction will be one counter to the stimulus and the existing conditions.

4.3.3.4. This hypothesis of similarity is theoretically and demonstrably valid, and it is the basis of homeopathy.

4.4. In principle homeopathy is a scientific approach to medical treatment which incorporates the individuality of the patient, and if this is true in practice, then the homeopathic approach is scientifically better founded than that of EBM.

5. The evidence for homeopathy

5.1. *Evidence of a Scientific Approach:* Evidence that homeopathy has employed a secure scientific approach to medicine is seen in the following facts.

5.1.1. Homeopathy was the first medical system to fully incorporate the idea that micro-organisms played a role in infectious diseases, some sixty years before Koch observed the cholera bacterium:

5.1.1.1. "On board ships – in those confined spaces, filled with mouldy watery vapours, the cholera-miasm finds a favourable element for its multiplication, and grows into an enormously increased brood of those excessively minute, invisible, living creatures, so inimical to human life, of which the contagious matter of the cholera most probably consists." [Samuel Hahnemann (trans. R E Dudgeon), *Appeal to Thinking Philanthropists Respecting the Mode of Propagation of the Asiatic Cholera*, (Leipzig: the author, 1831) in *The Lesser Writings of Samuel Hahnemann*, 1851 edition (New Delhi: B Jain Publishers, repr. edn 2002), p. 758.] Original attached as "Hahnemann p758".

5.1.2. Homeopathy was the first medical system to propose that such micro-organisms could evolve, some thirty years before publication of Darwin's *On the Origin of Species*.

5.1.2.1. "The fact that this extremely ancient infecting agent has gradually passed, in some hundreds of generations, through many millions of human organisms and has thus attained an incredible development, renders it in some measure conceivable how it can now display such innumerable morbid forms in the great family of mankind." [Samuel Hahnemann (trans. William Boericke), *Organon of Medicine*, 6th edn, manuscript completed 1841, 1st English edn 1921 (Calcutta: Roy Publishing House, repr. edn 1972), § 81, p. 160.] Original attached as "Hahnemann p160".

5.1.3. Homeopathy was the first medical system to conduct scientific trials of medicines *before* using them to treat the sick:

5.1.3.1. "As regards my own experiments and those of my disciples every possible care was taken to insure their purity, in order that the true powers of each medicinal substance might be clearly expressed in the observed effects. They were performed on persons as healthy as possible, and under regulated external conditions as nearly as possible alike." [Samuel Hahnemann (trans. R E Dudgeon), 'Author's Preface to the 3rd Edition, 1830' in *Materia Medica Pura* (New Delhi: B Jain Publishers, repr. edn 2002), p. 2. The first edition of the first volume was published in 1811.] Original attached as "Hahnemann p2".

5.1.3.2. "Therefore medicines, on which depends man's life and death, disease and health, must be thoroughly and most carefully distinguished from one another, and for this purpose tested by careful, pure experiments on the healthy body for the purpose of ascertaining their powers and real effects …" [Samuel Hahnemann (trans. William Boericke), *Organon of Medicine*, 6th edn, manuscript completed 1841, 1st English edn 1921 (Calcutta: Roy Publishing House, repr. edn 1972), § 120, p. 187.] Original attached as "Hahnemann p187".

5.1.4. Homeopathy was the first medical system to identify the importance of biophysics to the understanding of living organisms, health and disease, a field still being developed over 160 years after Hahnemann's death. [See Samuel Hahnemann (trans. William Boericke), *Organon of Medicine*, 6th edn, manuscript completed 1841, 1st English edn 1921 (Calcutta: Roy Publishing House, repr. edn 1972), §§ 11 and n., pp. 96-98.] Originals attached as "Hahnemann p96" and "Hahnemann p98".

5.1.5. Homeopaths promoted hospital hygiene, some 50 years before Florence Nightingale.

5.1.5.1. See Samuel Hahnemann, 'Protection against infection in epidemic diseases', and 'Things that spoil the air' in *The Friend of Health: Part I* (Frankfurt am Main: [n. pub.], 1792) in Samuel Hahnemann (trans. R E Dudgeon MD), *The Lesser Writings of Samuel Hahnemann*, 1851 edn (New Delhi: B. Jain Publishers, repr. edn 2002.] Examples are attached as "Hahnemann p168" and "Hahnemann p178".

5.1.6. Homeopathy has a history of consciously employing placebos in practice as a check on whether chosen medicines are effective or not.

5.1.6.1. "It has been shown here that the very earliest external placebo-controlled trials of homeopathy to be discovered used placebos modelled on those already in use as part of Hahnemannian practice" [Michael Emmans Dean, The Trials of Homeopathy: Origins, Structure and Development (Essen: KVC Verlag, 2004), pp. 244-245.] Original attached as "Dean p244".

5.1.7. Homeopathy is the first medical system to develop a general law (Hering's Law of Cure) which provides a universal basis for the assessment of changes of health in individuals.

5.1.7.1. "Hering's Law holds that as a disease passes from an acute to a chronic form the symptoms move from the surface of the body to the interior, from the lower part of the body to the upper, and from the less vital organs to the more vital. This is also true, in part, for the movement of symptoms in acute disease. Under correct homeopathic treatment this movement is reversed, and the symptoms will then move from the more vital organs to the less, from the upper part of the body to the lower, and from the interior to the skin. Furthermore, they will disappear in the reverse order of their appearance." [Coulter, Harris L., 1981, *Homoeopathic Science and Modern Medicine*, Berkeley, North Atlantic Books.] Original attached as "Coulter p23" and "Coulter p24".

5.1.7.2. The first formulation of Hering's Law of Cure in chronic diseases was published in English in 1845, and was formulated on the basis of consistent success in treating such illnesses. [*Homeopathy*, 94 (2005), 265.] Originals attached as "Hering's Law" and "Hering's Law First".

5.1.7.3. This Law has subsequently been used by homeopaths for over 150 years as a basis for assessing effectiveness.

5.2. *Clinical Outcomes Evidence:* Clinical outcome studies and surveys, where homeopathic principles are applied during treatment, provide consistent evidence for the effectiveness of homeopathic treatment.

5.2.1. "Homeopathic intervention offered positive health changes to a substantial proportion of a large cohort of patients with a wide range of chronic diseases." [D.S. Spence, E.A. Thompson, S.J. Barron, 'Homeopathic Treatment for Chronic Disease: A 6-Year, University-Hospital Outpatient Observational Study', *Journal of Alternative and Complementary Medicine*, 2005, 11:793-798.] Original attached as "Spence".

5.2.2. "In 65% of patient cases, GPs documented a health improvement, with a high degree of correlation between GP and patient assessment of health improvement (source, project monitoring data)." Large improvements were seen in patients using homeopathy. [Donal McDade, *Evaluation [of a] Complementary and Alternative Medicines Pilot Project* (London: Department of Health, Social Services and Public Safety, 2008, p. 7), pp. 6 and 29.] Original attached as "McDade".

5.2.3. "… a significant number (26/35: 74%) of patients reported a positive outcome from their treatment. Within this group 15% experienced complete remission of their problem" [Dr. Adrian Hunnisett, *Homeopathy Service Survey* (Cirencester: The Park Surgery, 2005), p. 10.] Original attached as "Hunnisett".

5.2.4. "…seven out of ten patients visiting a Norwegian homeopath reported a meaningful improvement in their main complaint 6 months after the initial consultation." [A. Steinsbekk and R. Lüdtke, 'Patients' assessments of the effectiveness of homeopathic care in Norway: A prospective observational multicentre outcome study', *Homeopathy*, 94 (2005), 10-16, p. 10.] Original attached as "Steinsbekk".

5.2.5. "1283 adults (67.4% of the study population, 48.7% of all responders) and 655 children (80.0%/61.0%) experienced a clinically relevant treatment success, defined as an improvement of complaint severity of 2 pts or more." [Claudia M. Witt, Rainer Lüdtke, Nils Mengler, and Stefan N. Willich, 'How healthy are chronically ill patients after eight years of homeopathic treatment? – Results from a long term observational study', *BMC Public Health*, 8 (2008), 413.] Original attached as "Witt".

5.2.6. "Eighty-six patients (75%) responded sufficiently to homeopathy, and 25 (22%) needed MPD" [H. Frei and A. Thurneysen, 'Treatment for hyperactive children: homeopathy and methylphenidate compared in a family setting', *British Homeopathic Journal*, 90 (2001), 183-188, p. 185.] Attached as "Frei".

5.3. *RCT Evidence:* Evidence from randomised placebo controlled trials is complicated by the need for them to abide by two sets of criteria, those of pharmacological testing and those of homeopathic principles.

5.3.1. Where a trial fails to meet pharmacological criteria it is not considered a robust test of treatment.

5.3.2. Where a trial fails to meet homeopathic criteria the verum arm of the trial will include cases treated with placebo, leading to a convergence in the results of the two arms. See *Halloween Science* pp. 57-62. Attached as "Halloween Science".

5.3.3. In an extreme case, the test will simply compare two placebos:

5.3.3.1. "These authors used a double-blind protocol to test the effect of *Arnica* 30c and *Arnica* 1M (mountain daisy) in stroke, but found no significant benefit from the treatment. However, an analysis of the results in a highly critical and objective review of homeopathic research [Scofield, 1984] showed that of the 40 patients entered into the 1977 study only three had the typical homeopathic symptom picture of *Arnica*, and these three showed good progress during homeopathic therapy. In the 1978 trial, only one patient presented typical *Arnica* symptoms and was included in the placebo group!" [Paolo Bellavite and Andrea Signorini, *The Emerging Science of Homeopathy: Complexity, biodynamics, and nanopharmacology* (Berkley: North Atlantic Books, 2002), p. 45. They refer to R.H. Savage and P.F. Roe, 'A further double-blind trial to assess the benefit of Arnica montana in acute stroke illness', *Brit. Hom. J.*, 67 (1978), 210-222, p. 210 and A.M. Scofield, 'Experimental research in homeopathy: A critical review', 2 parts, *Brit. Hom. J.*, 73 (1984), p. 161.] Original attached as "Bellavite p45".

5.3.4. Any reliance on "evidence for the efficacy" from RCTs of homeopathic treatment requires, therefore, extremely careful attention to the rigour with which such trials meet the demands of homeopathic principles and practice.

5.3.5. The increasing awareness of this issue is leading to better designed trials, and this is reflected in the fact that the pharmacologically 'best designed trials' show that homeopathic treatment is significantly better than placebo:

5.3.5.1. "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." [Ben Goldacre, *Bad Science* (London: Fourth Estate, 2008), p. 53.] Original attached as "Goldacre p52" and see also "Jadad Analysis".

5.4. *Laboratory Evidence:* Evidence from laboratory tests also indicates that in principle 'potentised' substances can produce biological effects. See 'Memorandum submitted by Dr Peter Fisher' (HO 21), *Evidence Check*, pp. Ev 25-26. Original attached as "Evidence Check".

6. The placebo effect

6.1. The argument that benefit from homeopathic treatment is simply the placebo effect has no scientific validity.

6.2. The placebo effect is the name given to effects observed after a treatment has been given which is inert, which means that homeopathic treatment has to be proved inert.

6.2.1. There is evidence that the relationship of similarity produces effects (see 4.3.3.2 above), so this is not an inert relationship.

6.2.2. Some medicines often used by homeopaths are still biochemically active (e.g. potencies up to 6c), so these cannot be described as inert.

6.2.3. There is evidence from laboratory research (see 5.4 above) that potentised substances used by homeopaths can be biologically active, so potentised substances cannot be assumed to be inert, but must be proved so.

6.2.3.1. This means that arguments based on chemistry and Avogadro's number are scientifically inadequate.

6.2.4. Therefore, homeopathic treatment has not been proved inert in respect of either its treatment approach or its medicines, and so describing its effects as the placebo effect cannot be scientifically justified.

6.3. For the placebo effect to occur the subject must have an expectation of a particular result, which may be positive or negative.

6.3.1. There is no evidence that patients treated homeopathically experience effects specifically related to expectation.

6.3.2. There is evidence that homeopaths are unaware of what to expect from treatment, and that the effects of treatment can produce new information about the case.

6.3.2.1. See James Tyler Kent, *Lectures on Homoeopathic Philosophy*, 5th edn (New Delhi: B. Jain Publishers, repr. edn 1993), chapter 35. Originals attached as "Kent p224" to "Kent p234".

6.3.3. There is evidence that patients, including animals and babies, experience effects unrelated to expectation.

6.3.3.1. "I had a very, very dramatic experience with my son when he was nine months old. He had gastro difficulties, started throwing up, could not keep any food down and turned into skin and bone. At the hospital, they did every test to him, and in the end they just handed him back to me. My wife and I were in bits. My poor baby. The kid was dying. It was terrifying. I thought, there's got to be something. I'd heard of homoeopathy, so I found a local guy in the Yellow Pages and took my boy there. He gave him some powders. Within two weeks he was putting weight on, keeping the food down. The trouble recurred periodically for a couple of years, but he's now 27, a fit and healthy young man." See "Daltrey".

6.3.3.2. "The most robust animal model is the effect of thyroxine on the rate of metamorphosis of frogs. In substantial dose thyroxine increases the rate of metamorphosis, it has the reverse effect in ultramolecular dilution. This effect has been reproduced in multi-centre experiments and by independent workers with different species of frog." ['Memorandum submitted by Dr Peter Fisher' (HO 21), *Evidence Check*, pp. Ev 25-26.] See "Evidence Check".

6.3.4. Therefore, the effect of homeopathic treatment cannot be due to expectation, and so cannot be equated with the placebo effect.

6.4. There is a discrepancy between the effects of homeopathic treatment and the placebo effect.

6.4.1. The placebo effect is unreliable, usually short-lived and of limited effect size.

6.4.1.1. "there is lots of data to show that placebo effects are notoriously unreliable; somebody who responds today may not respond tomorrow; responses are not large in effect size and they are not usually long-lasting." [Edzard Ernst, response to question 126, *Evidence Check*, p. Ev 47.]" See "Evidence Check".

6.4.2. Homeopathy has been found to produce effects which are substantial and long-lasting.

6.4.2.1. "Patients who seek homeopathic treatment are likely to improve considerably. These effects persist for as long as 8 years" [Claudia M. Witt, Rainer Lüdtke, Nils Mengler, and Stefan N. Willich, 'How healthy are chronically ill patients after eight years of homeopathic treatment? – Results from a long term observational study', *BMC Public Health*, 8 (2008), 413.] Original attached as "Witt".

6.4.3. Therefore, it is highly unlikely that the effects are the placebo effect.

6.5. There is no scientific explanation for the placebo effect, and so it cannot offer a scientific explanation for homeopathy.

6.5.1. "We note, however, that a 'proper understanding of the power and complexities of the placebo effect' is difficult to achieve, since we are not aware of any scientific consensus at present on the mechanisms by which placebos have an effect." [*Government Response to the Science and Technology Committee report 'Evidence Check 2: Homeopathy',* presented to Parliament by the Secretary of State for Health by Command of Her Majesty, July 2010, para. 14, p. 6.] Original attached as "DoH Response".

6.5.2. Therefore it cannot be the basis of a scientific explanation of how homeopathic treatment works.

6.6. On the basis of the above points, all claims that the effects of homeopathic treatment are the placebo effect actually rely on the variable results of RCTs, but these results can be more simply and better explained by the problems of trial design. See 5.3 above and subsections.

7. Summary of general points

7.1. Homeopathy is legal, part of the NHS, and has a sound theoretical basis for claiming to be a scientific approach to medicine, so promoting it is not, in principle, a reasonable basis for a complaint to the ASA.

7.2. There is a growing evidence base for homeopathic treatment with consistently good results in outcome studies, significant laboratory evidence, and variable results in RCTs, though the last can be readily explained by researcher inexperience combined with the technical problems of meeting two very different sets of trial criteria.

7.3. There is no secure scientific justification, in theory or practice, to support claims that the effects of homeopathic treatment are the placebo effect, and such claims are actually based on mistaken conclusions drawn from the variability of RCT results.

7.4. The H:MC21 advertisement in the *New Statesman* was based on the evidence and reasoning supplied above, and consideration of the specific statements should reflect this.

8. The specific complaints

8.1. "Homeopathy has a history of success in chronic illness"

8.1.1. Potential evidence for this statement includes too many reports of reputable homeopaths from the last 200 years to include here.

8.1.1.1. "Hundreds of thousands of case histories, recording successful cases. (NICE accepts case series as evidence in its review of treatments)." ['Memorandum submitted by The Faculty of Homeopathy (HO 22)', *Evidence Check*, para 3.2, p. Ev 135.] See "Evidence Check".

8.1.2. This experience is summed up in the formulation and use of Hering's Law of Cure used by homeopaths. See 5.1.7 above and subsections.

8.1.3. RCTs have also shown that homeopathic treatment is efficacious in chronic conditions, such as Fybromyalgia, Osteoarthritis, Seasonal Allergic Rhinitis, Sinusitis, Vertigo, Chronic Fatigue Syndrome and Premenstrual Syndrome.

8.1.3.1. We believe that evidence on this has been submitted to the ASA by the Society of Homeopaths and the British Homeopathic Association in 2008, and that there has been no response to this yet.

8.1.3.2. Lists of research evidence appear on the websites of both the Society of Homeopaths and the Faculty of Homeopathy. Attached as "SoH RCT Evidence", "Faculty RCT Evidence" and "Faculty Reviews".

8.1.3.3. Evidence of such research was submitted by the British Homeopathic Association to the Commons Science and Technology Committee. ['Memorandum submitted by The British Homeopathic Association (HO 12)', *Evidence Check*, paras 3.2-3.24, pp. Ev 38-39.] Attached as "Evidence Check".

8.1.3.4. Evidence of such research was submitted by the Complementary Medicine Research Group, University of York to the Commons Science and Technology Committee. ['Memorandum submitted by Complementary Medicine Research Group, University of York (HO24)', *Evidence Check*, p. Ev 144.] Attached as "Evidence Check".

8.1.4. Clinical outcome studies also confirm that homeopathic treatment is effective in chronic disease. See 5.2 and subsections above.

8.1.4.1. A list of clinical outcome studues appears on the website of the Faculty of Homeopathy. See "Faculty Clinical Studies".

8.1.4.2. Evidence of such research was submitted by the British Homeopathic Association to the Commons Science and Technology Committee. ['Memorandum submitted by The British Homeopathic Association (HO 12)', *Evidence Check*, para. 4.2, p. Ev 39.] Attached as "Evidence Check".

8.1.4.3. Evidence of such research was submitted by the Faculty of Homeopathy to the Commons Science and Technology Committee. ['Memorandum submitted by The Faculty of Homeopathy (HO 22)', *Evidence Check*, para. 3.3, p. Ev 135.] Attached as "Evidence Check".

8.1.5. It is impractical for an advertisement to contain all the evidence, and so we presented examples which illustrated the success of homeopathy seen from different perspectives.

8.2. "At Bristol Homeopathic Hospital 70.7% of 6,500 patients with chronic conditions benefited from homeopathic treatment and had reduced need for conventional medicine"

8.2.1. The study report is attached. The number of patients (6,544) was actually *greater* than stated in the advertisement. Changes in medication formed part of the objective evidence in producing outcome scores. Attached as "Spence".

8.2.2. Other similar studies are attached in which the reduction in conventional medication is recorded separately and confirms the claim that benefit from homeopathc treatment goes with a reduction in conventional medication. See 5.2 and subsections above.

8.2.2.1. "The analysis also found a reduction of 14 percentage points in the proportion of patients who said they were taking medication following their treatments (a drop from 75% at the first appointment to 61% following treatment)." [Donal McDade, *Evaluation [of a] Complementary and Alternative Medicines Pilot Project* (London: Department of Health, Social Services and Public Safety, 2008), para 3.4, p. 32] See "McDade".

8.2.2.2. "Almost half of all respodents (46%) reported a decreased reliance on prescribed pharmaceutical medication and associated side effects." [Dr. Adrian Hunnisett, *Homeopathy Service Survey* (Cirencester: The Park Surgery, 2005), p. 8] See "Hunnisett".

8.2.2.3. "The proportion of patients using conventional medication reduced from 39% to 16%" [A. Steinsbekk and R. Lüdtke, 'Patients' assessments of the effectiveness of homeopathic

care in Norway: A prospective observational multicentre outcome study', *Homeopathy*, 94 (2005), 10-16, p. 10.] See "Steinsbekk".

8.2.2.4. "Here the percentages of patients who experienced substantial improvements were consistently above 50%, although conventional medication was reduced." [Claudia M. Witt, Rainer Lüdtke, Nils Mengler, and Stefan N. Willich, 'How healthy are chronically ill patients after eight years of homeopathic treatment? – Results from a long term observational study', *BMC Public Health*, 8 (2008), 413.] See "Witt".

8.2.2.5. "The 500-patient survey at the Royal London Homeopathic Hospital showed that many patients were able to reduce or stop conventional medication following homeopathic treatment" ['Clinical Outcomes Studies', Faculty of Homeopathy website] See "Faculty Clinical Studies".

8.3. "...more randomised controlled trials are positive than negative"

8.3.1. This statement is made repeatedly.

8.3.1.1. In the evidence of the Faculty of Medicine to the Commons Science and Technology Committee:

8.3.1.1.1. "… in over 100 RCTs there are far more positive than negative results in spite of the fact that in the trials involving classical homeopathy, all trial participants, including those in the placebo group, will have benefited from the homeopathic process as outlined above" [see the 'Memorandum submitted by The Faculty of Homeopathy (HO 22)', *Evidence Check*, para 5.2, p. 136]. See "Evidence Check".

8.3.1.2. In the evidence of the British Homeopathic Association to the Commons Science and Technology Committee:

8.3.1.2.1. "Of the 142 trials overall, the summary finding was positive in 44%, negative in 8% and statistically non-conclusive in 48%." ['Memorandum submitted by The British Homeopathic Association (HO 12)', *Evidence Check*, para. 3.2, p. Ev 38.] See "Evidence Check".

8.3.1.3. In the evidence of the Complementary Medicine Research Group, University of York to the Commons Science and Technology Committee.

8.3.1.3.1. "In 44% (n=60) the studies report positive findings, where the homeopathy treatment showed statistically significant superior effect compared to placebo, and those effects have been replicated by two or more studies … In contrast 7% of the RCTs reported negative findings, where the homeopathy was considered to have a worse effect than the placebo, whilst nearly half (49% n=68) find inconclusive results." ['Memorandum submitted by Complementary Medicine Research Group, University of York (HO24)', *Evidence Check*, p. Ev 144.] See "Evidence Check".

8.3.1.4. Since these organisations represent doctors trained and qualified in both orthodox and homeopathic treatment or independent researchers, we regard their assessments as reliable.

8.4. **"In Cuba, an integrated approach to healthcare has led to homeopathy being used to enable 2.3 million, including the elderly, to be cheaply and effectively protected against endemic Leptospirosis"**

8.4.1. *Integrated approach:* As we stated, the study emphasised that it had employed an integrated approach, and that it could not provide evidence for the effectiveness of homeopathy alone:

8.4.1.1. "Taking into account that the HP intervention was implemented in a large population of a high-risk endemic area, the data strongly suggest high effectiveness of HP and support its applicability to control of epidemic disease. However, there is no evidence supporting the replacement of conventional strategies and no data regarding efficacy are presented. The rational design of combined strategies to confront a complex epidemic situation should improve the effectiveness of control measurements. [*Homeopathy*, 99 (2010), 156-166, p. 165.] Original attached as "Bracho".

8.4.2. *Numbers:* The number treated was as stated in our advertisement.

8.4.2.1. "This formulation was administered orally to 2.3 million persons at high risk in an epidemic in a region affected by natural disasters." [*Homeopathy*, 99 (2010), 156-166, p. 156.] See "Bracho".

8.4.2.2. "These three provinces were considered as one single geographical area, designated the Intervention Region (IR). The total population at the beginning of the study was 2,404,787 persons" [*Homeopathy*, 99 (2010), 156-166, p. 158.] See "Bracho".

8.4.3. *Effectiveness:* The study showed evidence of effectiveness.

8.4.3.1. "After the homeoprophylactic intervention a significant decrease of the disease incidence was observed in the intervention regions. No such modifications were observed in non-intervention regions. In the intervention region the incidence of Leptospirosis fell below the historic median. This observation was independent of rainfall." [*Homeopathy*, 99 (2010), 156-166, p. 156.] See "Bracho".

8.4.3.2. "The homeoprophylactic intervention was strongly associated with a drastic reduction of disease incidence resulting in complete control of the epidemic." [*Homeopathy*, 99 (2010), 156-166, p. 165.] See "Bracho".

8.4.3.3. "Fifth, the reduction in the number of confirmed cases in IR occurred within 2 weeks but was sustained for the next 57 weeks. This sharp decrease of incidence does not suggest an expected effect of vaccination or chemoprophylaxis considering the time needed to induce a protective immune response by vaccines and the short temporal protection of antibiotics. In fact, because of the vaccination schedule of vaxSpiral®, the immunization of newly exposed individuals was finished in a time frame several weeks after the effects observed at IR. The reduction of confirmed cases on IR was coincident with the achievement of 70% of coverage of HP treatment." [*Homeopathy*, 99 (2010), 156-166, p. 165.] See "Bracho".

8.4.4. *Cost:* Costs are not detailed in the report of this study in *Homeopathy*, but relative costs can be inferred.

8.4.4.1. Conventional immunisation has been successfully used in "at-risk groups" for some years:

8.4.4.1.1. "vaxSpiral demonstrated a 78.1% efficacy and good safety profile in clinical trials conducted in Cuba has been included in the national immunization program since 1998 for immunization of individuals over 15 years old in at-risk groups (mainly farmers and animal breeding workers)." (p. 157)

8.4.4.2. In the face of rising rates of infection, extension of this successful conventional immunisation to the whole population would be a logical step, but a new treatment was developed instead.

8.4.4.3. One reason for this is likely to be the time involved in producing the conventional vaccine. See the attached excerpt from a conference presentation by the Finlay Institute. Attached as "Cuba Vaccines".

8.4.4.4. Another reason is likely to be cost, which will also be related to the time needed to prepare the treatment.

8.4.4.5. That cost is a relevant factor is confirmed by the report's reference to "modest resources":

8.4.4.5.1. "The massive application of HP in the IR also showed potential regarding feasibility and time saving. When trained and organized personnel are involved in the HP application, large coverage can be achieved in a short time with modest resources." (p. 165) See "Bracho".

8.4.4.6. Unreferenced figures for the cost-saving have appeared on the *Homeopathy Today* website, and these may be accurate:

8.4.4.6.1. "The cost of the Leptospirosis project was US$200,000, whereas the costs of conventional vaccination, only for the most at-risk populations – i.e. children, pregnant women, and the elderly – is about US$3,000,000." Attached as "Cuba Costs"

8.4.5. *Age of those treated:* The intervention involved all those over one year of age, and its success included zero infection rates for 24 out of 52 weeks of the following year, so elderly people also benefited.

8.4.5.1. "The entire population over 1 year of age from the provinces of Las Tunas (LT), Holguín (HG) and Granma (GR) in eastern region of Cuba, independent of their physical, psychological or social status was considered as risk group and target population." [*Homeopathy*, 99 (2010), 156-166, p. 158.] See "Bracho".

8.4.5.2. "Additionally, in the IR in 2008, in 24 out of 52 weeks there were no confirmed cases and in 40 of 52 weeks, 0-2 cases/week (Figure 2B). In contrast, the number of cases in the RC remained similar to historic levels with a high number of infected people at the last weeks of the year and no change in the trend in either 2007 or 2008 (Figure 3B)." [*Homeopathy*, 99 (2010), 156-166, p. 163.] See "Bracho".

8.5. "About 6 million people in the UK choose Homeopathy"

8.5.1. It is difficult to see how this statement could be misleading, since it is based on unchallenged evidence given to the House of Commons Science and Technology Committee and on a World Bank assessment of the UK population.

8.5.1.1. "… 10 per cent of the population use these products …". [Response by Professor Kent Woods, Chief Executive, Medicines and Healthcare Products Regulatory Agency to question 211, *Evidence Check*, p. Ev 70.] Attached as "Evidence Check".

8.5.1.2. "Population, total: 61,838,154 (2009)" [Data on the United Kingdom from theWorld Bank website at <http://data.worldbank.org/country/united-kingdom>.] Attached as "UK Population".

8.5.2. 10% of 61 million is "about 6 million".

8.6. "of the 2,500 most commonly used treatments in the NHS, 51% have unknown effectiveness"

8.6.1. If this statement is misleading, then the *British Medical Journal Clinical Evidence* website is providing the medical profession with misleading information. Attached as "BMJ Evidence 2010".

8.6.2. The precise percentage of treatments of "unknown effectiveness" varies over time as the figures are updated, and the figure can go up as well as down. In 2008 the figure was 46%. Attached as "BMJ Evidence 2008".

8.7. "Even a small increase in spending on homeopathy could produce dramatic benefits, reducing care needs and increasing patient quality of life"

8.7.1. This statement is based on the information provided, and we believe that it represents a reasonable conclusion drawn from that information.

8.7.2. According to evidence given to the House of Commons Science and Technology Committee, the current spending on homepathic medicines in the NHS is around £152,000, which is 0.001% of the drugs budget of £11 billion.

8.7.2.1. "in terms of drugs it is £152,000 out of a massive £11 billion drugs budget, so therefore it is quite a small amount in that drugs budget but it is £152,000 nonetheless."[Response by Mr Mike O'Brien QC, MP, Minister for Health Services, Department of Health to question 196, *Evidence Check*, p. Ev 67.] Attached as "Evidence Check".

8.7.3. The NHS drugs budget is part of a total current NHS budget of around £102 billion.

8.7.3.1. "The NHS's share of that has been reduced by more: down £2.6bn from £104.6bn as planned in last year's Budget, to £102.3bn." [Sally Gainsbury, 'Budget 2009: NHS asked to cut £2.3bn from plans in 2010-11', *Health Service Journal*, 22 April 2009.] Attached as "NHS Budget".

8.7.4. We had understood that total spending on homeopathy in the NHS (including staff and premises) was estimated as being £12 million, but a closer look at the evidence given to the House of Commons Science and Technology Committee suggests that this is a total for *three* years, rather than the annual total for each year, making spending on homeopathy as a whole in the NHS 0.004% of the total budget.

8.7.4.1. "We have four hospitals – one in Glasgow, three in England – which provide homeopathic assistance to people and we do provide some NHS funding for those, so it would run into several million on that basis, so probably less than 12 – I think I saw that in the Guardian as a quote for the total cost between 2005 and 2008 – so probably less than that but not too much less." ."[Response by Mr Mike O'Brien QC, MP, Minister for Health Services, Department of Health to question 244, *Evidence Check*, p. Ev 73.] Attached as "Evidence Check".

8.7.5. Were NHS spending raised to reflect just 1% of the demand in the population (i.e. to 0.1% of the NHS Budget), 27 times more patients with chronic illnesses could be expected to benefit and have both reduced conventional medication needs and a better quality of life. Such a reduction would also entail a reduction in care needs.

8.7.6. Were homeopathic medicine costs to increase proportionately, and conventional medicine costs to decrease proportionately, there would be significant saving on the drugs budget.

8.7.6.1. Annual savings would be around £6.9 million per year (i.e. 0.1% of £11 billion less 27 x £152,000)

8.7.6.2. Given that the effects of homeopathic treatment can last eight years (see 6.4.2.1 above), there would be cumulative savings as more new patients are brought onto homeopathic treatment each year.

8.7.6.3. Furthermore if referrals to homeopathic treatment for chronic conditions were made earlier as a result of extra spending on homeopathy, then the savings on conventional medicines could be even greater.

8.7.7. In the light of the cost of the swine flu vaccination programme, the Cuban study (see 8.4 above and subsections) indicates that increasing spending on a homeopathic contribution to immunisation, as part of an integrated approach to care, could produce an effective medical intervention with rapid and long-lasting benefits leading to seriously reduced demands on NHS services.

8.7.8. Because homeopathic treatment does not produce side effects, further savings in NHS care could also be made. See 8.10 below and subsections.

8.8. "Sense About Science is funded by pharmaceutical companies"

8.8.1. Sense About Science has received an average of 34% of its income from the pharmaceutical industry over the last six years, the percentage varying from 27.0% to 56.5% of its income, and the amounts rising from £18,000 in 2004 to £62,000 in 2008 (see the table below). Accounts attached as "SaS Accounts 2005" to "SaS Accounts 2009".

Donor by year	2004	2005	2006	2007	2008	2009	Totals
Amersham			£10,000				**£10,000**
Association of the British Pharmaceutical Industry	£3,000		£3,000	£3,000	£3,000	£3,000	**£15,000**
Astra Zeneca	£15,000		£15,000	£15,000	£34,000	£17,000	**£96,000**
Eli Lilly		£2,000					**£2,000**
GE Healthcare			£12,000	£12,000	£10,000	£10,000	**£44,000**
Glaxo-Smith-Kline		£10,000	£13,000	£13,000	£15,000		**£51,000**
Pfizer		£10,000		£10,000			**£20,000**
Totals	**£18,000**	**£22,000**	**£43,000**	**£53,000**	**£62,000**	**£30,000**	**£228,000**
Annual Income	£57,141	£38,940	£146,175	£167,544	£145,902	£111,245	**£666,947**
% from pharmaceutical industry	31.5%	56.5%	29.4%	31.6%	42.4%	27.0%	**34.2%**

8.8.2. Between 2006 and 2009 this charity has also taken a leading role in attacking homeopathy (see the 'Memorandum submitted by Sense About Science (HO36)', *Evidence Check*, paras 3-3.6, pp. Ev 7-8, and 8.11 and subsections below). See "Evidence Check".

8.8.3. In other words, during the same period as this charity has been attacking homeopathy, it has received a huge increase in its income from an industry with a vested interest.

8.8.4. In this context, it is not misleading, but entirely appropriate to draw attention to the fact that Sense About Science receives funding from the pharmaceutical industry.

8.9. "*Trick or Treatment?* has been shown to be scientifically unreliable"

8.9.1. In 3.3.3 and 3.3.5 above, we pointed out that without scientific definitions of disease and benefit, efficacy could only be approximated in trials, and this view was also put forward in *Trick or Treatment?*, though a distinction between 'effectiveness' and 'efficacy' was not drawn in this book:

8.9.1.1. "In particular, we will answer the fundamental question: 'Is alternative medicine effective for treating disease?' Although a short and simple question, when unpacked it becomes somewhat complicated and has many answers depending on three key issues. First, which alternative therapy are we talking about? Second, which disease are we applying it to? Third, what is meant by effective?" (p. 3).

8.9.1.2. At no point do the authors of *Trick or Treatment?* supply a definition of disease or explain that orthodox medicine and homeopathy disagree over the definition.

8.9.1.3. At no point do the authors of *Trick or Treatment?* explain "what is meant by effective", or explain that orthodox medicine and homeopathy disagree over the definition.

8.9.2. The authors of *Trick or Treatment?* also provide four definitions of alternative medicine, which are not only incompatible with each other, but are all subjective and incompatible with the facts.

8.9.3. On this basis alone it is impossible for the book to be scientifically reliable since it fails to define its basic terms, and these are only two of the 19 major errors in the book.

8.9.4. Our detailed critique of *Trick or Treatment?* was published early in 2009 and its arguments have not even been challenged, let alone rebutted. The full critique is attached as "Halloween Science", together with the abstract as "Halloween Abstract".

8.10. "The NHS spends £2 billion annually on treating adverse side effects of conventional drugs. Homeopathy has no side effects"

8.10.1. The statement that "homeopathy has no side effects" is not denigratory, since side effects are not desirable.

8.10.2. It is generally accepted that there is no evidence that homeopathic treatment causes side effects, nor any theoretical foundation for claiming that it does, so the statement is not irresponsible.

8.10.2.1. "The evidence for homeopathy is not impressive, except possibly in terms of lack of adverse effects." [Earl Baldwin of Bewley, 2010, p. 6.]

8.10.3. There is no dispute that drugs produce side effects (see 4.2.1.1), so stating this cannot be denigratory or irresponsible.

8.10.4. The cost to the NHS of side effects is a matter of public concern, since public money pays for them, and this is why the report was published from which this statement was taken, so stating this cannot be denigratory or irresponsible.

8.10.4.1. The report was written by the Health Editor of *The Guardian*, a paper not noted for supporting homeopathy, and was based on figures from the Compass thinktank. We are not aware that this information has been challenged, so it cannot be denigratory to quote from the report. Attached as "NHS Side Effects".

8.10.4.2. At the time the NHS drugs bill was £11 billion, and this has not reduced. There have been no reports of a dramatic decrease in the incidence of side effects either. On this basis it is reasonable to assume that the information is still valid, and so it is not irresponsible to quote it.

8.10.5. In other words the basis for the complaint must lie in the juxtaposition of these facts, which is a wholly unacceptable argument.

8.10.6. In order to "advance the education of the public", it is necessary to put relevant facts together, and to fail to do so is to withhold information from the public which is of material importance to its interests.

8.10.7. The comparison between the side effects of conventional medicine and the lack of side effects from homeopathic treatment is also recognised an important and fair issue for discussion:

8.10.7.1. "Nor is the argument even-handed if examination of true side-effects in homeopathic and conventional treatment is not addressed when discussing the comparative merits of the two approaches, patient satisfaction, and government policy." [Earl Baldwin of Bewley, *Observations on the report 'Evidence Check 2: Homeopathy' by the House of Commons Science and Technology Committee*, *February 2010*, June 2010, para. 3.3, p. 4.] Attached as "Baldwin Critique".

8.11. "Opposition to homeopathy is based on propaganda"

8.11.1. This statement is a conclusion based on many facts, and the referenced statements which follow it are simply key pointers to understanding the attacks on homeopathy.

8.11.2. *Evidence.*

8.11.2.1. When the evidence for homeopathy is attacked, the public is not also told that there is a lack of evidence for more than half the most commonly used conventional treatments, a very important context.

8.11.2.1.1. This omission leads to statements such as "alternative medicine, by definition, seems to consist of treatments that are untested, or unproven, or disproven, or unsafe, or placebos, or only marginally beneficial" (*Trick or Treatment?*, p. 287, discussed in *Halloween Science*, p. 125), even though many conventional treatments meet the same definition. See "Halloween Science".

8.11.2.1.2. To omit important information in this way is propaganda.

8.11.2.2. Similarly, evidence is frequently misrepresented:

8.11.2.2.1. "The exaggeration by the Committee of Shang's conclusions is worrying. It is difficult to see how a weakly supported positive effect, for which one explanation (possibly well-founded) is a placebo effect, can be translated into a conclusive demonstration of this effect, with a 'devastatingly' negative finding." [Earl Baldwin of Bewley, *Observations on the report 'Evidence Check 2: Homeopathy' by the House of Commons Science and Technology Committee*, *February 2010*, June 2010, para. 2.3, p. 2.] See "Baldwin Critique".

8.11.2.2.2. To exaggerate in this way is propaganda.

8.11.2.3. Evidence is also disbelieved without foundation and then reported inaccurately:

8.11.2.3.1. According to Ben Goldacre's evidence to the Commons Science and Technology Committee, "… what you see when you look at the best quality trials is that homeopathy pills work no better than placebo pills. [Ben Goldacre, response to question 23, *Evidence Check*, p. Ev 11]. However, in his book *Bad Science* he states the opposite, namely, that "there are some good-quality trials bucking the trend and showing that homeopathy is better than placebo", adding that he does not believe this evidence. [Ben Goldacre, *Bad Science* (London: Fourth Estate, 2008), p. 53.] See "Evidence Check", "Goldacre p52" and "Jadad Analysis".

8.11.2.3.2. To misrepresent evidence because you do not believe it is propaganda.

8.11.2.4. Evidence is presented in a distorted form which leads to false conclusions:

8.11.2.4.1. The graph on this same page of *Bad Science* (attributed to Edzard Ernst) uses a trendline based on excluding the best quality and worst quality trials, though this is not made clear. The result is, therefore, a misrepresentation of the facts to a readership unlikely to notice the omission. [Ben Goldacre, *Bad Science* (London:

Fourth Estate, 2008), p. 53.] We attach a document explaining the implications. See "Goldacre p52" and "Jadad Analysis".

8.11.2.5. Deliberately deceiving people is propaganda.

8.11.3. The public has been told repeatedly that expert scientific opinion is that homeopathy does not work, but the most quoted 'expert' for this point of view, Edzard Ernst, is not qualified in the field (see 8.12 below and subsections), is inconsistent in his arguments (see 8.9 above and subsections), and is criticised by other researchers (see 8.11.8.2).

8.11.3.1. To rely on a person's professional status despite their lack of qualifications or 'expertise' is propaganda.

8.11.4. The self-appointed representative of the scientific community in attacking homeopathy, Sense About Science, has close links to vested interests (see 8.8 above and subsections) and has engaged in unscientific practices, such as the following:

8.11.4.1. 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. [see section 3 of the 'Memorandum submitted by Sense About Science' (HO36), *Evidence Check*, pp. Ev 7-8.] See "Evidence Check".

8.11.4.1.1. "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. [Department of Health 'Homoeopathic Services document', 25 October 2007.] Attached as "DoH Logo".

8.11.4.1.2. One of the signatories was Professor Edzard Ernst, Peninsula Medical School, Exeter (see also 8.12 below). ['A letter calling for homeopathy boycott', *Times Online*, 23 May 2007] Attached as "Times Letter".

8.11.4.2. To misrepresent information as official when it is pesonal opinion is propaganda.

8.11.5. 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. This stunt had no scientific basis; it did not appear to target registered homeopaths; and no complaints were brought against any homeopaths. Nonetheless, it is frequently cited as an example of the dangers posed by homeopaths.[see section 3 of the 'Memorandum submitted by Sense About Science' (HO36), *Evidence Check*, pp. Ev 7-8.] See "Evidence Check".

8.11.5.1. When a charity which claims "to promote evidence and good science for the public" gives support to stunts, it provides a spurious scientific credibility and turns it into propaganda.

8.11.6. Almost all the arguments used against homeopathy are contained in the book (*Trick or Treatment?*).

8.11.6.1. Neither of the authors is qualified in homeopathy (see also 8.9 above and subsections); one is a trustee of Sense About Science (Simon Singh); and the other is Professor Edzard Ernst, Peninsula Medical School, Exeter (see also 8.12 below).

8.11.6.2. This book masquerades as being scientific without abiding by the basic requirements of science, and so it is simply propaganda.

8.11.7. The recent Commons Science and Technology Committee report *Evidence Check 2: Homeopathy* reported that homeopathy does not work, but it has been shown to have distorted the process and the evidence.

8.11.7.1. See William Alderson, *Critique of the House of Commons Science and Technology Committee 'Evidence Check 2: Homeopathy'* (Stoke Ferry: Homeopathy: Medicine for the 21st Century, 2010). Attached as "HMC21 Critique".

8.11.7.2. See *BHA Response*, parts 1 to 6 (British Homeopathic Association website, 2010). Attached as "BHA Critique 0" to "BHA Critique 6".

8.11.7.3. See Earl Baldwin of Bewley, *Observations on the report 'Evidence Check 2: Homeopathy' by the House of Commons Science and Technology Committee, February 2010*, June 2010.] Attached as "Baldwin Critique".

8.11.7.4. Such manipulation of the process and evidence is propaganda.

8.11.8. The evidence to the Committee also showed that witnesses were prepared to give contradictory or poorly supported evidence:

8.11.8.1. "The written submission by Dr. Goldacre [Ev. 8] was notably short on supporting evidence, but contained unqualified statements on the ineffectiveness of homeopathy, forcefully expressed ("extreme quackery" was mentioned). By contrast, the submission by the Complementary Medicine Research Group from the Department of Health Sciences at the University of York presented a well-argued summary with 68 references [Ev. 143]." [Earl Baldwin of Bewley, *Observations on the report 'Evidence Check 2: Homeopathy' by the House of Commons Science and Technology Committee, February 2010*, June 2010, p. 5.] See "Baldwin Critique".

8.11.8.2. "It was unwise to rely heavily on the interpretations of one professor of CAM [Edzard Ernst], some of whose statements are unsound or in conflict with other statements of his, and who is not without his critics in the worlds of research and academia whose views were given less prominence." [Earl Baldwin of Bewley, *Observations on the report 'Evidence Check 2: Homeopathy' by the House of Commons Science and Technology Committee, February 2010*, June 2010, p. 6.] See "Baldwin Critique".

8.11.8.3. In response to the question: "Is the definition of homeopathy in France exactly the same as it is in this country?" [Graham Stringer, question 53, *Evidence Check*, p. Ev 15], Ben Goldacre responded: "Yes, it is sugar pills that have been treated ceremonially, if you like, …" [response to question 53, *Evidence Check*, p. Ev 15]; "I would imagine that there would be a huge number of different definitions in France and in England." [response to question 54, *Evidence Check*, p. Ev 16]; and "There is no substantively different understanding of the meaning of the word 'homeopathic' between France and England." [response to question 55, *Evidence Check*, p. Ev 16]. See "Evidence Check".

8.11.8.4. To exhibit no clear and consistent hold on the truth is propaganda.

8.11.9. There are also questions about the impartiality of the three MPs who voted for the report (see 8.12.6 below).

8.11.10. The report has been rejected by the government. Attached as "DoH Response".

8.11.11. A published analysis of the propagandist nature of the attacks on homeopathy is attached. [William Alderson, 'A Check Without Balance: How double-standards are being used to remove homeopathy from the NHS' (*Counterfire* website, 2010).] Attached as "Check No Balance".

8.11.12. All the information given here is in the public domain and has not been successfully challenged.

8.11.13. It is not irresponsible to alert the public to the fact that the arguments against homeopathy are not well-founded and are contradictory.

8.11.14. It is not irresponsible to alert the public to the fact that key individuals putting those arguments are connected with each other and with vested interests.

8.11.15. In the face of the unreliability of the statements of some individuals publicly attacking homeopathy, the connections those individuals have with each other, and the high public profile they have on this issue, it is not denigratory to alert the public to their shortcomings.

8.11.16. We consider that it is neither irresponsible nor denigratory to call this approach to homeopathy 'propaganda', but a reasonable conclusion based on the evidence.

8.12. "The leading so-called 'expert' and critic of homeopathy, Professor Edzard Ernst, has admitted that he has no qualifications in homeopathy"

8.12.1. This admission appears in an interview in *Homöopathische Nachrichten* (April 2010), and Ernst has not denied that it is true. Attached as "Ernst Translation" and "Ernst German".

8.12.2. As the translator of the interview points out: "To be able to add 'homeopathy' to one's medical title in Germany, one has to have passed an exam at the relevant regional branch of the German Landesärztekammer [medical council]." (p. 3. See "Ernst Translation".

8.12.3. However, in an article he wrote for the *British Journal of Clinical Pharmacology* in 2002, for example, Ernst asserted that "The author is a trained homeopath", implying that he has a recognised standard of training. [In a E. Ernst, 'A systematic review of systematic reviews of homeopathy', *British Journal of Clinical Pharmacology*, 54 (2002) , 577–582, p. 581.]. Attached as "Ernst Review".

8.12.4. Ernst has continued to maintain that he has had sufficient training to qualify as a homeopath, but this is his own assessment of his abilities, not in any way an objective assessment.

8.12.5. Ernst has also been criticised for providing inaccurate evidence to the Commons Science and Technology Committee. For example:

8.12.5.1. "Both [Linde and Lüdtke] are critical of Prof. Ernst's evidence to the Committee as highlighted in 67. Prof. Linde confirms that his own 1999 re-analysis weakened the findings of his 1997 review and probably 'at least overestimated the effects of homeopathic treatments', but that his paper was 'not "negative"' as stated by Ernst." [Earl Baldwin of Bewley, *Observations on the report 'Evidence Check 2: Homeopathy' by the House of Commons Science and Technology Committee*, *February 2010*, June 2010, p. 3.] See "Baldwin Critique".

8.12.6. Prior to this interview, our critique of *Trick or Treatment?* revealed that he did not exhibit a sound understanding of the principles, practice and history of homeopathy, so we believe that the onus is on him to prove that he truly meets the standards recognised by a formal qualification. See "Halloween Science".

8.12.7. Since Ernst has exhibited less than rigorous standards as an expert, whilst adopting the position as an authority, it is neither irresponsible nor denigratory to inform the public that there is a discrepancy between his claims to authority and his actual qualifications.

8.13. "The recent Science and Technology Committee report on homeopathy was voted for by only three MPs".

8.13.1. Given the profound changes demanded by this report, it is not irresponsible to make the public aware of the very low number of MPs who actually voted for it (3 out of 14). ['Formal minutes', *Evidence Check*, pp. 48-50.] See "Evidence Check".

8.13.2. We consider this information even more significant because:

8.13.2.1. Only one of these three actually attended the hearings (Dr Evan Harris), and he has previously received support from Sense About Science, is now on their Advisory Panel, and has actively supported opposition to homeopathy, such as the ten23 protests on 30 January 2010. See "Harris Register", "Harris SaS" and "Harris Ten23".

8.13.2.2. Another of the three (Ian Cawsey) only joined the committee in January 2010, so he was not even a member of the committee until after the hearings had concluded. ['Declaration of Interests', *Formal Minutes for Wednesday 20 January 2010* (House of Commons Science and Technology Committee, 2010), pp. 9-10.] See "Evidence Check".

8.13.2.3. The third of the three (Doug Naysmith) did not attend any of the hearings [*Evidence Check*, pp. Ev 1, Ev 60], and he had been a member of the Parliamentary All Party Pharmacy Group [the Register of Members' Interests], which aims "To raise awareness of the profession of pharmacy, and to promote pharmacists' current and potential contribution to the health of the nation" [the All Party Pharmacy Group website]. Prior to being an MP he had been involved in pharmaceutical reasearch, including working as an immunologist at Beechams Laboratories ['Doug Naysmith: Electoral history and profile', *The Guardian*.]. See "Evidence Check", "Naysmith Register", "Pharmacy Group", and "Naysmith Profile".

8.13.3. This added information, too much to be included in an advertisement, shows that the statement about the number of MPs who voted for the report is not denigratory, but succinctly draws appropriate attention to the question of the reliability and impartiality of the Committee's report.

9. Conclusion

9.1. We believe that we have justified all our statements, but if further information is required, we will endeavour to provide it.

9.2. We believe that there is nothing in this advertisement which has not already been published without serious challenge, and that we have a legal right and a legal obligation to bring this information to public attention.

9.3. We believe that the complaints against this article arise not from the need to expose errors of fact, but from a desire to suppress public expressions of support for homeopathy.

9.4. As such, we believe that an attempt is being made to use the ASA as a weapon in a propaganda campaign against homeopathy.

10. Additional points of concern

10.1. We are aware that the ASA is a self-regulatory body of the advertising industry and that the pharmaceutical industry is a large investor in advertising, so we are concerned that this could lead to a conflict of interest.

10.2. We are aware that the ASA has a position on the promotion of homeopathy which we have pointed out is scientifically questionable and which conflicts with homeopaths' legal right to practice and promote homeopathy, so we are concerned that the ASA may already be prejudiced on this issue.

10.3. We are aware that the ASA has already received substantial amounts of documentary evidence from the British Homeopathic Association, Faculty of Homeopathy and Society of Homeopaths, and we understand that the ASA has failed to respond to this for about two years, so we are concerned about the ability of the ASA to assess information about homeopathy.

10.4. We are concerned that the assessment and hearing of this case will be held *in camera*, and so we cannot be sure that all the evidence submitted will be taken into account.

10.5. We are concerned that those drafting a recommendation to the Council may not be properly qualified in homeopathy or competent to assess the evidence and the specialist issues involved.

10.6. We are also concerned that the members of the Council itself may not be competent to assess these specialist technical issues.

11. List of attached documents (in alphabetical order)

Baldwin Critique.pdf
Bellavite p45.pdf
BHA Critique 0.rtf
BHA Critique 1.rtf
BHA Critique 2.rtf
BHA Critique 3.rtf
BHA Critique 4.rtf
BHA Critique 5.rtf
BHA Critique 6.rtf
BMJ Evidence 2008.webarchive
BMJ Evidence 2010.webarchive
BNF Digitalis 1.webarchive
BNF Digitalis 2.webarchive
BNF Rebound 01.webarchive
BNF Rebound 02.webarchive
BNF Rebound 03.webarchive
BNF Rebound 04.webarchive
BNF Rebound 05.webarchive
BNF Rebound 06.webarchive
BNF Rebound 07.webarchive
BNF Rebound 08.webarchive
BNF Rebound 09.webarchive
BNF Rebound 10.webarchive
BNF Rebound 11.webarchive
BNF Rebound 12.webarchive
BNF Rebound 13.webarchive
BNF Rebound 14.webarchive
BNF Rebound 15.webarchive
BNF Rebound 16.webarchive
BNF Rebound 17.webarchive
BNF Rebound 18.webarchive
BNF Ritalin 1.webarchive
BNF Ritalin 2.webarchive
Bracho.pdf
Check No Balance.pdf
Coulter p23.pdf
Coulter p24.pdf
Cuba Costs.webarchive
Cuba Vaccines.pdf
Daltrey.webarchive
Dean p244.pdf
Digitalis Toxicity.webarchive
DoH Logo.webarchive
DoH Response.pdf
Ernst German.pdf
Ernst Review.pdf
Ernst Translation.pdf
Evidence Check.pdf
Faculty Clinical Studies.webarchive
Faculty RCT Evidence.webarchive
Faculty Reviews.webarchive
Frei.pdf
Goldacre p52.pdf
Goldacre p54.pdf
Hahnemann p160.pdf
Hahnemann p168.pdf
Hahnemann p178.pdf
Hahnemann p187.pdf
Hahnemann p2.pdf
Hahnemann p758.pdf
Hahnemann p96.pdf
Hahnemann p98.pdf
Halloween Abstract.pdf
Halloween Science.pdf
Harris Register.webarchive
Harris SAS.webarchive
Harris Ten23.webarchive
Hering's Law First.webarchive
Hering's Law.webarchive
HMC21 Critique.doc
Hunnisett.pdf
Jadad Analysis.doc
Kent p224.pdf
Kent p226.pdf
Kent p228.pdf
Kent p230.pdf
Kent p232.pdf
Kent p234.pdf
McDade.pdf
Merck Effects.pdf
Naysmith Profile.webarchive
Naysmith Register.webarchive
NHS Budget.webarchive
NHS Side Effects.webarchive
Pharmacy Group.webarchive
Sackett.webarchive
SaS Accounts 2005.pdf
SaS Accounts 2006.pdf
SaS Accounts 2007.pdf
SaS Accounts 2008.pdf
SaS Accounts 2009.pdf
SoH RCT Evidence.webarchive
Spence.pdf
Steinsbekk.pdf
Times Letter.webarchive
UK Population.webarchive
Witt.webarchive
Wulff p43.pdf
Wulff p77.pdf