

Pressure grows against homoeopathy in the UK

Health service funding is being stopped for some of the UK's homoeopathic hospitals, following an active campaign by doctors and scientists. Does this signal the beginning of the end of homoeopathy on the UK's National Health Service? Udani Samarasekera reports.

Homoeopaths in the UK have been feeling under pressure lately. Unfortunately for them, however, the cause of their anxiety is not a heavy workload but an active campaign against homoeopathy, particularly its availability in the UK's National Health Service (NHS). Over the past 2 years, journalists, doctors, and scientists, who point to the lack of evidence for the effectiveness of homoeopathy, have publicly voiced their criticisms.

The latest subject to irk antihomoeopathy campaigners is a symposium on the role of homoeopathy in HIV/AIDS treatment that is taking place in London on Dec 1, organised by the Society of Homeopaths—the largest organisation representing lay homoeopaths in Europe. “The symposium will be looking at different methods and approaches that appear to be having some success in helping with the symptoms of HIV/AIDS”, say the organisers. Michael Baum, professor emeritus of surgery at University College London and frequent critic of homoeopathy, thinks that homoeopaths are getting overconfident. “People say homoeopathy cannot do any harm but when it is being promoted for HIV then there is a serious problem”, he says.

Baum is not alone in his concern about the potential dangers of homoeopathy. Last year, an undercover investigation by charity Sense About Science, showed that the first ten homoeopathic clinics and pharmacies selected from an internet search and consulted were willing to provide homoeopathic pills to protect against malaria and other tropical diseases such as typhoid, dengue fever, and yellow fever. “Making false claims about treating colds is one thing but it is quite another thing to make false

claims about malaria”, says David Colquhoun, professor of pharmacology at University College London.

Both Colquhoun and Baum are among a group of doctors and scientists who, last May, sent a letter to Primary Care Trusts (the local bodies that pay for NHS care) in the UK to raise their concerns about the use of homoeopathy on the NHS. “It is an implausible treatment for which over a dozen systematic reviews have failed to produce convincing evidence of effectiveness”, they wrote. Baum says that the group have received a lot of criticism for issuing the letter and have even been accused of colluding with the pharmaceutical industry over their antihomoeopathy campaign. “But”, he says, “the reason that we started this campaign was out of a sense of despair over a malaise in society, a flight from rationalism”.

Their actions seem to be having an effect. In September, West Kent Primary Care Trust decided to stop NHS funding for the Tunbridge Wells Homeopathic Hospital—one of five hospitals that provide homoeopathy on the NHS. In a press statement,

James Thallon, the Primary Care Trust's medical director, said: “...it is the clear duty of PCTs [Primary Care Trusts] to make best use of public money by commissioning clinically cost-effective care...There is not enough evidence of clinical effectiveness for us to continue to commission homoeopathy”.

The Royal London Homoeopathic Hospital is also feeling the backlash. Several Primary Care Trusts have stopped, or drastically reduced, their funding of treatment at the hospital. Peter Fisher, clinical director at the hospital, says referrals were down by around 20% in October compared with the same month last year. Although he admits that the “evidence base is not as strong as we would like” for homoeopathy, he says, that “patients are our best advocates. They tell us that we have helped them when nothing else could”.

Indeed, homoeopathy, which has been available on the NHS since it began in 1948, remains ever popular with the UK public. Around 13 000 patients are treated at the five homoeopathic hospitals each year and 14.5% of the population say they trust

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The UK homoeopathic market is predicted to be worth £46 million in 2012



Referrals to the Royal London Homoeopathic Hospital are down

homoeopathic medicines. According to the market research group Mintel, the homoeopathy market is estimated to be worth £38 million and is projected to reach £46 million in 2012.

Baum thinks that public support for homoeopathy might be because people often confused it with herbal medicine. Although many herbal medicines are unproven, they have scientific plausibility, unlike homoeopathy, where often remedies are given in such a highly diluted form that not even a single molecule of active ingredient is left. Homoeopaths believe that dilution increases, not decreases, the strength of a remedy. They also treat like with like, so an illness is treated with a natural substance which could produce similar symptoms in a healthy person. For example, a homoeopathic remedy for insomnia might include caffeine.

A meta-analysis published by *The Lancet* in 2005, and four other large meta-analyses, have shown that the clinical effects of homoeopathy are no greater than placebo. Controversially, some commentators think there might be a future in prescribing homoeopathy because of its placebo effect. But Baum disagrees. He thinks that knowingly prescribing placebos is “unethical and patronising”. He believes that improving the communication skills of conventional doctors can improve patients’

experiences with clinically effective treatments, since they come with the added bonus of a placebo response.

Both the Society of Homeopaths and the Faculty of Homoeopaths—the professional body for doctors and other health professionals who integrate homoeopathy into their practice—disagree with the findings of the *Lancet* study. They believe that the effect of homoeopathy is greater than placebo and that the dilute homoeopathic remedies themselves exert an effect. “There are many scientists around the world who have found evidence that water may retain information about homoeopathically prepared solutes”, said a Faculty spokesperson. Baum cannot understand how anyone with scientific training, can believe in the principles and theories behind homoeopathy. “They seem to be able to divide their brain into two parts—rational and irrational”, he says.

But perhaps scientific training is not what it used to be. Six universities in the UK now offer Bachelor of Science degrees in homoeopathy, according to a news feature published in *Nature* in March. In an accompanying commentary, David Colquhoun wrote that homoeopathy “has barely changed since the beginning of the nineteenth century. It is much more like a religion than science”. Although most of the universities that teach complementary medicine have refused to show their teaching materials to Colquhoun, some have said they teach homoeopathy alongside more traditional subjects such as physiology. “The poor kids must be very confused”, he says. “One day they are learning the bigger the dose the greater the effect, the next day they are learning that the smaller the dose the greater the effect.”

Despite being slammed by many scientists and doctors, homoeopathy has received a recent boost from an unexpected quarter. In September, 2006, the Medicines and Health Regulatory Agency—the government

agency that is responsible for ensuring that medicines work, and are acceptably safe—introduced regulations that supported the use of homoeopathic over-the-counter remedies for some conditions. The new licensing scheme, to the dismay of many scientists and doctors, allows manufacturers of homoeopathic remedies to indicate what conditions their products could be used for. But, unlike conventional medicines, manufacturers only have to provide safety evidence and information about what their remedies are traditionally used for to gain a licence. Baum says, “I don’t know what external pressures have been put upon them to go ahead with these new regulations. When I spoke to them they said it was for self-limiting conditions—insomnia, constipation. But I told them that insomnia can be a sign of acute depression and constipation can be a sign of colorectal carcinoma”.

Baum thinks that the only way forward is for the UK’s National Institute for Health and Clinical Excellence (NICE)—the independent organisation responsible for providing clinical guidance on treatments in England, Wales, and Northern Ireland—to assess the cost-effectiveness of homoeopathy. The topic would have to be referred to NICE by the Department of Health for this to happen.

The Department of Health told *The Lancet* that NICE already “consider complementary therapies alongside conventional treatments when developing clinical guidelines”. So far none of NICE’s existing clinical guidelines recommend homoeopathy for any condition.

Baum thinks specific guidance on homoeopathy as a whole is still needed. “I had to wait 2 years for breast cancer treatments I knew to be effective to be approved by NICE. Why is there a double standard with homoeopathy?”

Udani Samarasekera

Homoeopathy booming in India

In India, where homoeopathy is a national medical system, the market is growing at 25% a year, and more than 100 million people depend solely on this form of therapy for their health care, the popularity of the dilute remedies shows no signs of abating. Raekha Prasad reports.

In the western Indian state of Maharashtra, Shantaram Chavan, a poor farmer diagnosed as HIV positive, responded in desperation to an advertisement in a local newspaper placed by Siddharth Jondhale, a homoeopathic doctor, who said he had found a cure for the virus. For 1 year, Chavan took the drug administered by Jondhale at his private clinic. He sold his tractor to raise the 150 000 rupees (US\$3800) to pay for the so-called miracle cure that Jondhale named HIV-SJ. During that year, the farmer's condition deteriorated.

India has the world's third highest caseload of HIV/AIDS after Nigeria and South Africa. Jondhale's clinic drew in hundreds—all of whom had seen one of his leaflets or read his website that claimed he had cured 4000 people with HIV in the past 2 years. Last month, the law finally caught up with Jondhale and he was prohibited from advertising the fanciful claims. He is currently under investigation by medical authorities.

The case, which made headlines in the national press, highlighted the widespread acceptance of homoeopathy in India as a viable treatment for the most serious of diseases. Around 10% of India's population—more than 100 million people—depend solely on homoeopathy for their health care, according to the Indian government.

The nation has almost a quarter of a million registered homoeopathic doctors—more than any other country in the world. The result is a permissive medical culture which sees "natural treatments" put on a par with scientific ones. Homoeopathy has become deeply rooted in India's public health provision—it has the third largest government-supported infrastructure after ayurvedic and modern medicine.

The Indian government has almost 11 000 homoeopathic hospital beds and three-quarters of all registered practitioners have been trained by the state. Medical students, regardless of whether they intend to be homoeopaths or modern medics, share the first 3 years of training. The result is that India's creaking public-health system faces competition from not only a well resourced private sector in conventional medicine but also a cheaper, widely available homoeopathic service. A visit to a homoeopathic doctor costs less than half the price charged by a medical doctor in India.

Another attraction is homoeopathy's reputation of being harmless, SPSingh, the Ministry of Health and Welfare's adviser on homoeopathy told *The Lancet*. "It does not give side-effects. With a small quantity of medicine we can serve a lot of people." Despite evidence to the contrary, Singh says that homoeopathy "has a biological effect" and that "all homoeopathic medicines are therapeutically proven".

India is arguably unique in the extent to which it has recognised

homoeopathy as a legitimate system of medicine. Despite originating in Germany, the Indian government has bestowed it with the status of a national medical system. India is also unusual in that it has seven national medical systems of which modern medicine is but one. Also recognised and administered by a special state department under the Ministry of Health and Family Welfare are ayurveda—India's traditional medical treatment—yoga, naturopathy, unani—a system dating back to ancient Greece, siddha, one of India's oldest health therapies from the south, and homoeopathy. The department, known by the acronym Ayush, has a budget of 10 billion rupees (\$260 million) over 5 years. "Money is not a problem", said Singh. "It will be spent on education, training, standardisation of drugs, implementation of health programmes, and rural health care."

Singh's defence of homoeopathy sits uneasily with the conventional, scientific approach to medicine. The Indian government adviser says that homoeopathy gives patients options

The printed journal includes an image merely for illustration

Private homoeopaths in India charge less for their services than conventional medical doctors



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German missionaries introduced homeopathy to India 200 years ago

and is complementary to modern drugs. "In cases of crisis management allopathic is better, but if you have digestive problems then maybe [homeopathic] is better. It is up to people to choose what they like."

Homeopathy is included under the umbrella department that is foremost intended to develop and sustain Indian health systems because of the notion that it shares some of the key characteristics of indigenous ancient medicine. "It has blended so well into the roots and traditions of the country that it has been recognised as one of the National Systems of Medicine and plays an important role in providing health care to a large number of people", the government website states.

Homeopathy was first brought to India almost 200 years ago by German missionaries who distributed remedies in Bengal. But it was not until 1839 when John Honigberger, a Romanian homeopath and disciple of the father of homeopathy, Samuel Hahnemann, successfully treated the then ruler of Punjab, Maharaja Ranjit Singh, in Lahore that homeopathy gained the royal patronage that enabled it to take root in India.

Health experts, however, are concerned that many homeopathic and ayurvedic doctors administer pharmaceutical drugs to their patients. "They [homeopathy and ayurveda] provide a back-door entry into medicine. Those who don't get

into medical colleges try to get into general practice in rural areas through the other systems", says Amar Jesani, an editorial board member of the *Indian Journal of Medical Ethics*.

The issue came to light in a high-profile case that reached India's highest court in 1996, after a patient died after a registered and qualified private homeopath gave him a cocktail of antibiotics—including drugs for typhoid. The court awarded the deceased's spouse compensation and ruled the doctor guilty of negligence. The Supreme Court held that cross-practising amounted to quackery, stating: "a person who does not have knowledge of a particular system of medicine but practices in that system is a quack and a mere pretender to medical knowledge or skill, or a charlatan". Despite the ruling, cross-practising persists. As many as 90% of doctors qualified in a system other than modern medicine are administering pharmaceutical drugs, according to the 52nd round of India's National Sample Survey.

Apart from a growing pool of doctors trained in homeopathy, the therapy's appeal is also due to the failure of the Indian public-health system which is ill equipped to serve the country's vast population. According to the UN Development Programme, India has just 48 physicians per 100 000 people. The poor provision means people turn to the private sector, both modern and homeopathic, which is lightly regulated.

However, medical physicians, say experts, are concentrated not only in private practice but also in predominantly wealthy urban India. This distribution again compounds the problem because poor people in rural areas, who make up most of India's population, are left with little choice but to visit the cheaper, more accessible homeopaths or ayurvedic doctors. "The government of India does not have incentives for allopathic doctors to go to rural areas. There is one doctor for every 250 people in Bombay and one

for 10 000 people in a rural area a few hundred kilometres away", says Jesani.

Like their contemporaries in the west, say health researchers, wealthy Indians see homeopathy as a route to wellbeing. The result is a booming domestic industry, which has given rise to several corporate homeopathic services. Estimated to be worth 6.3 billion rupees (\$165 million) this year, the homeopathy market is growing at 25% a year and within a decade spending on private homeopathy will be almost 60 billion rupees (\$1555 million). "An elite group of upper-middle and rich classes in India consider homeopathy to be fashionable. This has led to corporatisation", said Ravi Duggal, an independent health consultant in Mumbai. "Ethics are not on the agenda in [Indian] medicine. Making money is."

However, companies say that homeopathy needs to be professionalised to dispel the image that treatments are merely low-cost quackery. Mukesh Batra, who founded India's largest homeopathic chain of clinics—Dr Batra's—said most of his patients came for chronic conditions and that "15% have terminal illnesses". Batra says his clinics treat 130 000 people a year and his cyber clinic, which e-mails treatment plans and sends homeopathic medicine in the post to patients, treats another 450 000 worldwide. The homeopath is keen to break into new markets—even if national laws are designed to keep his products out. "There are 20 countries where homeopathy is illegal. We can break real boundaries [with the online system]", he said.

Batra, who claims to have remedies for miscarriage and stammering, defended homeopathy against its critics from the scientific establishment, saying that "everyone has a different personality so they have a different need. You will never get an agreement on what should be used. There are 200 medicines for a headache".

Raekha Prasad

animal studies should be acknowledged, since some reports¹¹ have suggested that rimonabant might have antidepressant or anxiolytic actions. Another observation that might provide an alternative physiological basis for increased mood disorders seen with greatest weight-loss comes from evidence that leptin, the adipose-derived hormone, had an antidepressant action after intrahippocampal but not hypothalamic injection.¹² However, direct clinical correlates are difficult to draw.

What is the significance of the findings reported by Christensen and colleagues? First, their meta-analysis has raised major questions about the safety of rimonabant in obese people, who are already at an increased risk of depression, especially since the FDA review suggests that the risk of suicide is increased by use of this agent. Moreover, at least four other companies have CB₁ antagonists in phase II or III development. The findings of Christensen and colleagues' meta-analysis suggest that phase III studies of such CB₁ antagonists should monitor psychiatric complications very carefully. Second, the link between depression and this CB₁-receptor blocker raises theoretical questions about a potential central role for the endocannabinoid system in both normal and clinical mood states.¹³

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Benefits and risks of homoeopathy

Five large meta-analyses of homoeopathy trials have been done. All have had the same result: after excluding methodologically inadequate trials and accounting for publication bias, homoeopathy produced no statistically significant benefit over placebo.¹⁻⁵ And yet homoeopathy can still be clinically useful.

During the cholera epidemic in the 19th century, death rates at the London Homoeopathic Hospital were three times lower than those at the Middlesex Hospital.⁶ The reason for homoeopathy's success in this epidemic is even more interesting than the placebo effect. At the time, nobody could treat cholera, and while medical treatments such as blood-letting were actively harmful, the homoeopaths' treatments were at least inert.

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- 1 Di Marzo V, Matias I. Endocannabinoid control of food intake and energy balance. *Nat Neurosci* 2005; **8**: 585–89.
- 2 Cooke D, Bloom S. The obesity pipeline: current strategies in the development of anti-obesity drugs. *Nat Rev Drug Disc* 2006; **5**: 921–31.
- 3 Curioni C, Andre C. Rimonabant for overweight or obesity. *Cochrane Database Syst Rev* 2006; **4**: CD006162.
- 4 Padwal RS, Majumdar SR. Drug treatments for obesity: orlistat, sibutramine, and rimonabant. *Lancet* 2007; **369**: 71–77.
- 5 Christensen R, Kristensen PK, Bartels EM, Bliddal H, Astrup A. Efficacy and safety of the weight-loss drug rimonabant: a meta-analysis of randomised trials. *Lancet* 2007; **370**: 1706–13.
- 6 Onyike CU, Crum RM, Lee HB, et al. Is obesity associated with major depression? Results from the Third National Health and Nutrition Examination Survey. *Am J Epidemiol* 2003; **158**: 1139–47.
- 7 Food and Drug Administration Endocrinologic and Metabolic Advisory. June 13, 2007. Briefing Information, NDA 21-888 ZIMULTI (rimonabant)—Sanofi-Aventis. 2007. <http://www.fda.gov/OHRMS/DOCKETS/AC/07/briefing/2007-4306b1-00-index.htm> (assessed Aug 6, 2007).
- 8 Gobbi G, Bambico FR, Mangieri R, et al. Antidepressant-like activity and modulation of brain monoaminergic transmission by blockade of anandamide hydrolysis. *Proc Natl Acad Sci USA* 2005; **102**: 18620–25.
- 9 Hill MN, Ho WS, Sinopoli KJ, et al. Involvement of the endocannabinoid system in the ability of long-term tricyclic antidepressant treatment to suppress stress-induced activation of the hypothalamic-pituitary-adrenal axis. *Neuropsychopharmacology* 2006; **31**: 2591–99.
- 10 Moreira FA, Kaiser N, Monory F, et al. Reduced anxiety-like behaviour induced by genetic and pharmacological inhibition of the endocannabinoid-degrading enzyme fatty acid amide hydrolase (FAAH) is mediated by CB1 receptors. *Neuropharmacology* 2007; published online July 19. DOI:10.1016/j.neuropharm.2007.07.005.
- 11 Griebel G, Stemmelin J, Scatton B. Effects of the cannabinoid CB1 receptor antagonist rimonabant in models of emotional reactivity in rodents. *Biol Psychiatry* 2005; **57**: 261–67.
- 12 Lu X-Y, Kim CS, Frazer A, et al. Leptin: a potential novel antidepressant. *Proc Natl Acad Sci USA* 2006; **103**: 1593–98.
- 13 Vinod KY, Hungund BL. Role of the endocannabinoid system in depression and suicide. *Trends Pharmacol Sci* 2006; **27**: 539–45.



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Similarly, modern medicine can offer little for conditions such as many types of back pain, stress at work, medically unexplained fatigue, and most common colds. Going through a theatre of medical treatment, and trying every drug in the book, will only elicit side-effects. An inert pill in these circumstances seems a sensible option.

However, just as homoeopathy has unexpected benefits, so it can have unexpected side-effects. The very act of prescribing a pill carries its own risks: medicalisation, reinforcement of counterproductive illness behaviours, and promotion of the idea that a pill is an appropriate response to a social problem, or a modest viral illness.

Similarly, when a health-care practitioner of any description prescribes a pill which they know is no more effective than placebo—without disclosing that fact to

their patient—then they disregard both informed consent and their patient's autonomy. Some could argue that this cost is acceptable, but such old-fashioned paternalism can ultimately undermine the doctor-patient relationship.

There are also more concrete harms. A routine feature of homeopaths' marketing practices is to denigrate mainstream medicine. One study found that half of all homeopaths who were approached advised patients against the measles, mumps, and rubella vaccine for their children.⁷ A television news investigation found that almost all homeopaths who were approached recommended ineffective homeopathic prophylaxis for malaria, undermined medical prophylaxis, and did not even give simple advice on bite prevention.⁸ Undermining medicine is a wise commercial decision for homeopaths, because survey data show that a disappointing experience with mainstream medicine is one of the few features to regularly correlate with a decision to use alternative therapies. But it might not be a responsible choice.

Homeopaths can undermine public-health campaigns; leave their patients exposed to fatal diseases; and, in the extreme, miss or disregard fatal diagnoses. There have also been cases of patients who died after medically trained homeopaths advised them to stop medical treatments for serious medical conditions.^{9,10}

All these problems have been exacerbated by society's eagerness to endorse the healing claims of homeopaths, and by the lack of a culture of critical self-appraisal in alternative medicine. Publication bias in alternative therapy journals is high: in 2000, only 5% of studies published in complementary or alternative health journals were negative.¹¹ To my knowledge, the ethical issues of autonomy and placebo have never been discussed. Homeopaths routinely respond to negative meta-analyses by cherry-picking positive studies. An observational study,¹² which amounts to little more than a customer-satisfaction survey, has been promoted¹³ as if it trumps a string of randomised trials.

Homeopaths can misrepresent scientific evidence freely to an unsuspecting and scientifically illiterate public, but in doing so they undermine the public understanding of what it means to have an evidence base for a treatment. This approach seems particularly egregious when academics are working harder than ever to engage the wider public in a genuine understanding of research,¹⁴ and when most good doctors try to educate and involve their patients in the selection of treatment options.

Every criticism I have made could be managed with clear and open discussion of the problems. But homeopaths have walled themselves off from academic medicine, and critique has been all too often met with avoidance rather than argument. The Society of Homeopaths (in Europe) has even threatened to sue bloggers,¹⁵ and the university courses on alternative medicine which I and others have approached have flatly refused to provide basic information, such as what they teach and how.¹⁶ It is hard to think of anything more unhealthy.

To ban homeopathy would be an over-reaction, as placebos could have a clinical role. However, whether the placebo effect is best harnessed by homeopaths will remain questionable until these ethical issues and side-effects have been addressed.

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- 1 Kleijnen J, Knipschild P, ter Riet G. Clinical trials of homeopathy. *BMJ* 1991; **302**: 316–23.
- 2 Boissel JP, Cucherat M, Haugh M, Gauthier E. Critical literature review on the effectiveness of homeopathy: overview of data from homeopathic medicine trials. Brussels, Belgium: Homeopathic Medicine Research Group. Report to the European Commission. 1996: 195–210.
- 3 Linde K, Melchart D. Randomized controlled trials of individualized homeopathy: a state-of-the-art review. *J Altern Complement Med* 1998; **4**: 371–88.
- 4 Cucherat M, Haugh MC, Gooch M, Boissel JP. Evidence of clinical efficacy of homeopathy: a meta-analysis of clinical trials. *Eur J Clin Pharmacol* 2000; **56**: 27–33.
- 5 Shang A, Huwiler-Müntener K, Nartey L, et al. Are the clinical effects of homeopathy placebo effects? Comparative study of placebo-controlled trials of homeopathy and allopathy. *Lancet* 2005; **366**: 726–32.
- 6 Hempel S. *The medical detective*. London, UK: Granta Books, 2006.
- 7 Schmidt K, Ernst E. Aspects of MMR. *BMJ* 2002; **325**: 597.
- 8 Jones M. Malaria advice 'risks lives'. *Newsnight*, BBC2 July 13, 2006. <http://news.bbc.co.uk/1/hi/programmes/newsnight/5178122.stm> (accessed Nov 8, 2007).
- 9 General Medical Council Fitness To Practise Panel. Dr Marisa Viegas. 2007. http://www.gmc-uk.org/concerns/hearings_and_decisions/ftp/20070628_ftp_panel_viegas.asp (accessed Nov 8, 2007).
- 10 Sheldon T. Dutch doctor struck off for alternative care of actor dying of cancer. *BMJ* 2007; **335**: 13.
- 11 Schmidt K, Pittler M, Ernst E. Bias in alternative medicine is still rife but is diminishing. *BMJ* 2001; **323**: 1071.
- 12 Spence DS, Thompson EA, Barron SJ. Homeopathic treatment for chronic disease: a 6-year, university-hospital outpatient treatment observational study. *J Altern Complement Med* 2005; **11**: 793–98.
- 13 Grice E. Keep taking the arsenic. *Daily Telegraph* Nov 25, 2005. <http://www.telegraph.co.uk/health/main.jhtml?view=DETAILS&grid=P8&xml=/health/2005/11/25/hhomeo25.xml> (accessed Nov 8, 2007).
- 14 Evans I, Thornton H, Chalmers I. *Testing treatments: better research for better healthcare*. London, UK: British Library, 2006.
- 15 Goldacre B. Threats, the homeopathic panacea. *Guardian* Oct 20, 2007. <http://www.guardian.co.uk/science/2007/oct/20/homeopathy> (accessed Nov 6, 2007).
- 16 Giles J. Degrees in homeopathy slated as unscientific. *Nature* 2007; **446**: 352–53.