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for Science and Integrity in Healthcare

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Why is WHO guilty of WOO?¹

Acupuncturists claim that they can treat serious illnesses, including depression, dysentery, osteoarthritis, polio,² schizophrenia and whooping cough. As 'evidence' they refer³ to the World Health Organisation (WHO). WHO claims that acupuncture can cure some ailments. Does this match the evidence?

In 2013, the UK Committee on Advertising Practice (CAP) (Health: Acupuncture) rejected the majority of claims made in a 1996 WHO report,⁴ but stated "acupuncture could be effective in pain relief".⁵ Although this will not stop practitioners from misleading their patients, it has the potential to compel them to remove some claims from their websites, but this is not happening. The peak body for traditional acupuncturists, the British Acupuncture Council,⁶ with over 3,000 members, continues to cite WHO support. Over half of UK websites promoting acupuncture⁷ continue to claim that WHO recognises the use of acupuncture in the treatment of a range of medical problems, either directly or by linking to the now discredited WHO report.

What is acupuncture?

Putting aside all the twaddle about 'de qi'⁸ or 'Qi'⁹ – that non-existent 'energy' oscillates along invisible 'meridians' which transverse our bodies – acupuncture involves inserting fine needles into pre-defined points¹⁰ mapped onto our skin (supposedly to keep the 'Qi' in balance). Penetration of skin comes with some risks.¹¹ 'Laser-acupuncture', 'electro-acupuncture', 'pellets' and 'acupressure' might therefore be safe, but even using the same 'acupuncture points', they are not acupuncture.

Hasn't acupuncture been successful for thousands of years?

In reality, it has had a chequered history. In 1822, Emperor Dao Guang "issued an imperial edict, stating that acupuncture and moxibustion should be banned forever from the Imperial Medical Academy".¹² In the early 20th Century, the Chinese Communist Party ridiculed acupuncture as superstitious. Chairman Mao himself preferred Western medicine.

Today, even though it is just as bizarre as other forms of alternative medicine, it seems to have achieved credibility in developed countries. It is taught in some universities,¹³ courses attract professional development points and it is even supported in Australia by The Royal Australian College of GP's!¹⁴ The British Medical Acupuncture Society¹⁵ promotes acupuncture as an effective intervention.



But doesn't acupuncture help with pain?

The answer is "No!" Acupuncture is no better than a "toothpick for treating back pain".¹⁶ In November 2016, the National Institute for Health and Care Excellence (NICE) guideline, "On Low back pain and sciatica in over 16s: assessment and management"¹⁷ recommended that health practitioners "do not offer acupuncture for managing non-specific low back pain with or without sciatica".¹⁸ Writing in the *BMJ* in 2009, Madsen et al¹⁹ stated: "Our finding of limited, at best, analgesic effects of acupuncture corresponds with the seven Cochrane reviews on acupuncture for various types of pain, which all concluded that no clear evidence existed of an analgesic effect of acupuncture."

What's wrong with acupuncture research?

Much acupuncture research comes from China where data fabrication has been reported²⁰ to be at epidemic levels; it is therefore unwise to rely on studies from China. These almost invariably report positive results. Despite over 3,000 trials,²¹ some of them very well designed, there is still argument about the effectiveness of acupuncture for any ailment. Cochrane reviews are considered the most

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authoritative summaries of the science behind health interventions. Both Cochrane²² and PUBMED dispute the WHO claims, with the majority of conclusions being either “not effective”²³ or having “insufficient evidence”.²⁴ For a number of the listed conditions, such as dysentery and hypotension, there appears to be no relevant published research.

When positive results were identified, the research was of poor quality²⁵ or the clinical evidence was weak.²⁶ The majority of these studies did not include sham acupuncture. When it was included, both acupuncture and sham groups²⁷ had positive results.

Most researchers accept a placebo effect for acupuncture of up to 40% reduction in severity of symptoms, but most of this apparent benefit is probably a consequence of a statistical artefact known as ‘regression to the mean’ – that is, most conditions improve spontaneously over time. It is of no real benefit to patients. This renders invalid even the argument that acupuncture has value as a placebo.

It is well recognised among people who design clinical trials that choices made at the design phase have a great impact on the outcomes. Acupuncture studies²⁸ often fail to include a sham²⁹ or control group. Equipment has now been designed so that acupuncture studies can be perfectly controlled in a double-blind manner – but this is not popular with proponents of acupuncture. Acupuncturists also³⁰ undertake studies with no scientific validity in settings where high-quality studies have already failed.³¹

So what claims did WHO make?

Under ‘Diseases and disorders that can be treated with acupuncture’ their website states that it has been “*proved through controlled trials to be an effective treatment*” of 28 conditions and “effective, but needing more proof”, for 63 more.³² This is simply not true.

WHO’s ‘evidence’ comes from a 1979 report, drafted by a Chinese ‘integrative medicine doctor’. In 2003, WHO revisited the effectiveness of acupuncture, giving it a “*ringing endorsement*”.³³ Their uncritical, outdated document, which includes numerous studies over four decades old, is referred to by industry associations, university students, private health funds and thousands of practitioner websites as ‘evidence’. Following lobbying by Friends of Science in Medicine, in 2014 the link was removed, but WHO has never refuted the claims and practitioners still refer to the original report.

So why is WHO promoting pseudoscience?

The problem is historical: WHO became excited by early clinical trials which didn’t use sham acupuncture, but used ‘no treatment’ as the control, resulting in a huge placebo effect. Acupuncture was therefore promoted as a panacea for *emerging economies*. Since then, research has demonstrated that it is no more than a theatrical placebo.³⁴ While a small number of trials conclude that acupuncture is “possibly effective” for some illnesses, this needs to be independently replicated.

WHO does a great job in many areas of health care, but is letting poorer societies down badly when it comes to acupuncture. Their document is wrong. It will be difficult

to change, because WHO has abdicated their responsibilities in alternative medicine, passing it to individuals with vested interests in keeping acupuncture mainstream.

Underprivileged people in the emerging economies urgently need access to effective treatments. Those working with them already struggle to deliver medical help. Their efforts should not be undermined by misinformation supported by WHO. People trust WHO and believe that their recommendations about acupuncture are based on the best available evidence. Doesn’t the health of billions of underprivileged people deserve more than discredited pseudoscience?

Loretta Marron OAM, Chief Executive Officer, Friends of Science in Medicine, Australia

References

1. The Skeptic’s Dictionary. Woowoo <http://skepdic.com/woowoo.html>
2. Vander Kraats & Associates. Acupuncture <http://www.vdk.com.au/clinic/acupuncture>
3. British Acupuncture Council: List of conditions <http://www.acupuncture.org.uk/public-content/public-traditional-acupuncture/4026-who-list-of-conditions.html>
4. Steven Novella. The 1996 WHO Acupuncture Report <http://theness.com/neurologicablog/index.php/the-1996-who-acupuncture-report/>
5. CAP. Health: Acupuncture <https://www.cap.org.uk/Advice-Training-on-the-rules/Advice-Online-Database/Therapies-Acupuncture.aspx>
6. British Acupuncture Council. <http://www.acupuncture.org.uk/>
7. Friends of Science in Medicine. UK websites promoting acupuncture <http://www.scienceinmedicine.org.au/images/pdf/uk-acupuncturelist.pdf>
8. Xu S-b et al. Effectiveness of strengthened stimulation during acupuncture for the treatment of Bell palsy: a randomized controlled trial. CMAJ April 2, 2013;185(6):473-478 <http://www.cmaj.ca/content/185/6/473.long>
9. The Skeptic’s Dictionary. Acupuncture <http://skepdic.com/acupuncture.html>
10. Remedy Wellness Centre. Acupuncture in Victoria <http://www.remedywelfare.ca/acupuncture.html/>
11. Ernst E. More on the dangers of acupuncture. 4 May 2013 <http://edzardernst.com/2013/05/more-on-the-dangers-of-acupuncture/>
12. Friends of Science in Medicine. Is there any place for acupuncture in 21st century medical practice? 29 July 2016. www.scienceinmedicine.org.au/images/pdf/acupuncturereview.pdf
13. Vickers M. RMIT Open Day 2012 -Traditional Chinese Medicine. Vic Sceptics. 26 September 2012.

<http://vicskeptics.wordpress.com/2012/09/26/rmit-open-day-2012-traditional-chinese-medicine/>

14. The Royal Australian College of General Practitioners
<http://qicpd.racgp.org.au/program/overview/specific-interest-requirements/medical-acupuncture>
15. The British Medical Acupuncture Society
<http://www.medical-acupuncture.co.uk/>
16. Acupuncture for back pain - 2009 update. Bandolier, 2009
<http://www.bandolier.org.uk/booth/painpag/Chronrev/Other/acuback.html>
17. NICE. Low back pain and sciatica in over 16s: assessment and management. NICE guideline [NG59], November 2016
<https://www.nice.org.uk/guidance/NG59>
18. NICE. Non-specific low back pain and sciatica: management. Draft for consultation, March 2016
<https://www.nice.org.uk/guidance/GID-CGWAVE0681/documents/short-version-of-draft-guideline>
19. Madsen MV et al. Acupuncture treatment for pain: systematic review of randomised clinical trials with acupuncture, placebo acupuncture, and no acupuncture groups. BMJ 2009;338:a3115
<http://www.bmj.com/content/338/bmj.a3115>
20. Ernst E. Data fabrication in China is an 'open secret'. 4 October 2016
<http://edzardernst.com/2016/10/data-fabrication-in-china-is-an-open-secret/>
21. Colquhoun D. Acupuncture is a theatrical placebo: the end of a myth. 30 May 2013
<http://www.dscience.net/2013/05/30/acupuncture-is-a-theatrical-placebo-the-end-of-a-myth/>
22. Friends of Science in Medicine. Cochrane Reviews on Acupuncture - January 2014
<http://www.scienceinmedicine.org.au/images/pdf/cochraneacupuncture.pdf>
23. Enblom A. Acupuncture compared with placebo acupuncture in radiotherapy-induced nausea--a randomized controlled study. Ann Oncol;2012;23(5):1353-61
<http://www.ncbi.nlm.nih.gov/pubmed/21948812>
24. Smith CA et al. Acupuncture for Depression. Cochrane Database of Systematic Reviews 2010, Issue 1. Art. No.: CD004046

http://www.cochrane.org/CD004046/DEPRESSN_a_cupuncture_for_depression

25. Corbett MS et al. Acupuncture and other physical treatments for the relief of pain due to osteoarthritis of the knee: network meta-analysis. Osteoarthritis Cartilage 2013;21(9):1290-8
<http://www.ncbi.nlm.nih.gov/pubmed/23973143>
26. Wang J, Xiong X. Evidence-based Chinese medicine for hypertension. Evid Based Complement Alternat Med 2013;2013:978398
<http://www.ncbi.nlm.nih.gov/pubmed/23861720>
27. Choi SM et al. A multicenter, randomized, controlled trial testing the effects of acupuncture on allergic rhinitis. Allergy 2013;68(3):365-74
<http://www.ncbi.nlm.nih.gov/pubmed/23253122>
28. Zhang AL et al. Acupuncture and standard emergency department care for pain and/or nausea and its impact on emergency care delivery: a feasibility study. Acupunct Med 2014;32(3):250-6
<https://www.ncbi.nlm.nih.gov/pubmed/24610638>
29. Kajsa Landgren, Inger Hallström . Effect of minimal acupuncture for infantile colic: a multicentre, three-armed, single-blind, randomised controlled trial (ACU-COL).
<http://aim.bmj.com/content/early/2017/01/03/acupmed-2016-011208>
30. Avis NE et al. Acupuncture in Menopause (AIM) study: a pragmatic, randomized controlled trial. Menopause 2016;23(6):626-37
<https://www.ncbi.nlm.nih.gov/pubmed/27023860>
31. Avis NE et al. A randomized, controlled pilot study of acupuncture treatment for menopausal hot flashes. Menopause 2008;15(6):1070-8
<https://www.ncbi.nlm.nih.gov/pubmed/18528313>
32. British Acupuncture Council, WHO list of conditions, 13 January 2017
<http://www.acupuncture.org.uk/public-content/public-traditional-acupuncture/4026-who-list-of-conditions.html>
33. Barker M. Acupuncture revisited. New Left Project, 29 March 2013
http://www.newleftproject.org/index.php/site/article_comments/acupuncture_revisited
34. Colquhoun D, Novella S. Acupuncture Is Theatrical Placebo. Anesthesia & Analgesia. June 2013;116(6):1360–1363 <http://www.anesthesia-analgesia.org/content/116/6/1360>

News

Join the Googlegroup

If you're a HealthWatch member, and you have an e-mail address, you're eligible to join our Googlegroup to keep up to date and take part in member discussions. It's a benefit exclusive to HealthWatch members, so make the most of it. Join by e-mailing membership@healthwatch-uk.org

Take our survey to shape the future of HealthWatch

One outcome of last autumn's HealthWatch review meeting was that we should concentrate our efforts on two or three areas of investigation in depth. Previous projects have included the age extension trial of mammography screening, the student experience of CAM teaching in medical schools (1) and two investigations into the efficacy of the Consumer

Protection Regulations as applied to health claims (one published (2) and one in the final stages of data analysis).

Please help us to focus our efforts by completing a very short survey to suggest areas that you think we should investigate. Look out for the survey link, which will appear soon on the home page of our website

www.healthwatch-uk.org

1. Ho D et al. Focus Altern Complement Ther 2013;18(4):176–81
<http://onlinelibrary.wiley.com/doi/10.1111/ftc.12059/abstract>
2. Rose LB et al. Med Leg J 2012;80(1):13–8
<http://dx.doi.org/10.1258/mlj.2011.011034>

Closure of FACT journal

Sad to announce that the journal Focus on Alternative and Complementary Therapies (FACT) closed at the end of 2016. Publishers Wiley and the Royal Pharmaceutical Society took the decision to close the journal after 21 years, in the face of low numbers of submissions and a competitive market.

Editor Edzard Ernst, sharing the news, said “I tried my best to position FACT as a journal that looks critically at what is going on in the realm of CAM. I strongly believe that this is a necessary and ethical task. ... Please do continue to critically assess CAM research in every way you can.”

Regulators issue new advertising guidance for osteopaths

The Advertising Standards Authority has teamed up with the General Osteopathic Council to



send new guidance to over 4,800 registered osteopaths concerning marketing claims for pregnant women, children and babies. The move follows work by the Good Thinking Society (<http://goodthinkingsociety.org/>) which has reported over 300 osteopaths to the GOsC over misleading advertising.

The new ASA guidance clarifies that even indirect references to paediatric conditions should be avoided. For example, if an osteopath claimed that they often work with crying, unsettled babies, this implies that they would treat colic, which is unacceptable. The guidance also clarifies that osteopaths should avoid implying that the birth process is inherently traumatic for babies.

In admiration of a “free spirit”

We wanted to share our delight at the comments that appear frequently on BMJ’s “Rapid Responses” page under the name of “JK Anand, Retired doctor, Free spirit, Peterborough.” We hope Dr Anand won’t mind us sharing a recent gem of his, written in reply to a BMJ letter from HealthWatch members Alain Braillon and Susan Bewley: “I do wish you would stop talking sense. It is so embarrassing to our English Public Health. My GPs, fortunately, stopped asking me to become one of the QOF ‘subjects’. Treat me when I am ill, I say. Leave me alone otherwise. I am aged 84.

Hope to be 85 in about three weeks. Best wishes and a Happy New Year. JK Anand”.

Dr Anand, we hope you had a wonderful birthday and wish you, too, a very happy new year.

“Top tips” for increasing uptake of an ineffective screening test

Recent guidance from Public Health England arms general practitioners with psychological tactics to encourage patients to attend an NHS Health Check, despite evidence that shows such screening is ineffective. Their website offers ten ways to increase the public’s uptake of the screening tests, which are offered to all 40-74-year-olds in an attempt to control morbidity from high blood pressure, heart disease or type 2 diabetes. The “tips” include sending pre-assigned appointments for the test, encouraging public signing of a “commitment contract”, and frank emotional blackmail in the form of letters that say “Your GP has already set aside funding to pay for your appointment”.

The webpage includes a list of references to publications that support the use of such “tips” in behavioural modification. Sadly they have omitted to include the evidence from meta-analyses that show population health screening does not work.

Public Health England, August 2016:

<https://www.gov.uk/government/publications/nhs-health-checks-increasing-uptake/top-tips-for-increasing-the-uptake-of-nhs-health-checks>

Memory expert takes the Maddox Prize

The American cognitive psychologist and human memory expert Elizabeth Loftus has received the 2016 John Maddox Prize for standing up for science. Dr Loftus is best known for her painstaking research into eyewitness memory. Her work has undermined popular beliefs about how memories are formed and the nature of false memory, including recovered “memories” of childhood sexual abuse, and she has consulted or provided expert witness testimony for hundreds of cases. As a result she has faced years of personal attacks. Since 2012, the Maddox Prize has recognised the work of individuals who promote sound science and evidence on a matter of public interest, facing difficulty or hostility in doing so.

Making Sense of Forensic Genetics

A new free guide explains how forensic genetics is used in the criminal justice system, an increasingly complex field which is often misrepresented and misunderstood. The 40-page booklet includes real-life cases where DNA evidence has been a game changer and others where it has been misused. Sense about Science produced the guide with EUROFORGEN, a European network of forensic DNA researchers.

Download your copy at

<http://senseaboutscience.org/activities/making-sense-of-forensic-genetics/>

Chairman's report

A difficult year for homeopathy

The activities of HealthWatch and of our friends have seen significant progress in a number of important areas, whilst the challenges in other areas seem to be growing all the bigger.

I am personally very grateful to the committee for their commitment to the cause throughout the year. I would like to thank Debra Bick as Vice Chair, David Bender as Secretary, Anne Raikes our Treasurer, and to those who compose the rest of the committee, Susan Bewley, who is stepping down after many years of service and activity, Diana Brahams, Malcolm Brahams, Andrew Fulton, Sofia Hart, Alan Henness, John Illman, Keith Isaacson, John Kirwan, Tom Moberley, and Les Rose.

As ever we are all deeply grateful to Mandy Payne for editing the Newsletter each quarter, and to Caroline Addy for checking it for libel. Alan Henness is updating our website to make it easier to use, and to enable joining online.

The members' Googlegroup continues to be a place where a lot of HealthWatch activity takes place, and I would encourage you to join. It is a great way of sharing information quickly, and getting answers to questions and plotting responses to news items or consultations. Members can join by e-mailing membership@healthwatch-uk.org

Homeopathy has been having a difficult year with there now only being two areas in the England – Bristol and London – where it is available on the NHS. Alan Henness of our committee and our friends the Nightingale Collaboration have put sustained pressure on the Advertising Standards Authority to ensure that homeopaths are aware by means of a letter informing them of the marketing regulations governing their advertising and websites.

In March an article in the Sunday Times reported Les Rose arguing that homeopath charities fail the public benefit test of the Charities Commission. The NHS still spends between 3 and 5 million pounds a year on homeopathy so there is still work to be done.

Acupuncture is also on the back foot as evidence increasingly seems to show that it is ineffective in the treatment of anything. Our Australian colleagues 'Friends of Science in Medicine' have written a detailed report on the current state of acupuncture (and an article on the front page of this newsletter).

To compound the problems facing alternative therapies, David Colquhoun has written a detailed blog summarising the research showing that placebo effects are actually far more limited than we have perhaps been led to believe and are largely explained by regression to the mean. That is to say that people tend to seek help for their illnesses when they are

particularly bad, and it is no surprise that they frequently improve after this point.

Last year's debate on the Saatchi Bill and the 'Stop the Saatchi Bill campaign' has been rewarded by an amended bill being passed which was entirely stripped of any of the concerning legislation regarding the use of experimental treatments and leaving only a hypothetical register which was already allowed for without having to legislate.

This year our debate was on the Sugar Tax and produced a wide ranging and stimulating discussion on the nature of the evidence of the harms of sugar, the ethics of a tax which might disproportionately affect the poor, and the politics and practicalities of such a policy. The audience vote slightly in favour of supporting the tax. It was a useful exercise to explore the complexities of what it means to use evidence based medicine as the basis for policy changes.

David Colquhoun continues to use his blog DC Science to critique the so-called College of Medicine whose origins lay in the Prince of Wales Foundation for Integrated Health, with which we are all familiar. He criticizes their conference, 'Food the Forgotten Medicine' for being a bait-and-switch where they insist on dressing up their alternative treatments to have an orthodox façade. He also questions why some highly respected clinicians seem to support the College despite the clear departure from evidence based medicine.

Les Rose has persevered with a challenging study into the efficacy of consumer protection and is currently processing the data which clearly shows how difficult it is to persuade trading standards to act against products being sold with bogus health claims.

At least two members have received awards in the last year. Susan Bewley received the BMJ award for persistence and courage in 'speaking truth to power' and David Colquhoun received the Wellcome Gold Medal for his research achievements in pharmacology.

As HealthWatch is in its 25th year we have been reviewing our vision and activities, notably this afternoon in a highly productive period in which we discussed how we should move forward with the challenges and opportunities we now face. One of the significant challenges we have become aware of is the problem of communicating to likeminded people, and so we have particularly reflected on how we persuade those who we disagree with. Watch this space.

James May, Chairman, HealthWatch and GP, London

HealthWatch Award winner 2016

Why is it controversial to tell the truth about health care?

Peter Gøtzsche, physician, medical researcher and leader of the Nordic Cochrane Centre at Rigshospitalet in Copenhagen, Denmark, received the 2016 HealthWatch Award at the charity's 28th Annual General Meeting on Thursday 20th October 2016 at the Medical Society of London. This article is adapted from a transcript of his talk.

People ask me, why do you look for controversies? And I tell them, I don't, they come to me. My work is something like that of a medical detective. People come to me if they feel something is wrong in healthcare. When I start looking into these issues, I usually dig very deep. I find skeletons, and when I expose these skeletons, the people who buried them can get very angry.

Even in my most routine work, I dig deep and I still find skeletons.

I started digging many years ago when I looked into drug trials of the NSAIDs – arthritis painkillers. These were head-to-head trials, comparing one drug with another. I collected every trial I could find, and used meta-analytic methods to find out if the results were plausible. I found that they were not, in a statistical sense, and I published my conclusions in my thesis. Doug Altman, professor of statistics in medicine at the University of Oxford, saw my work and in 1990 he sent it to his colleague Iain Chalmers. I'd published three meta-analysis by this time and felt I was quite prolific, but Iain told me his group had published hundreds in Cochrane, a database I'd never heard of. He invited me to Oxford for the 1992 opening of the UK Cochrane Centre, of which he was the director. In 1993 we opened the Nordic Cochrane Centre and four years later I became a full time researcher there, reasoning that as a doctor I could only help one patient at a time, but if I did a good review I could help one hundred thousand.

It was felt that my results with NSAIDs had been so shocking that it must be something that only applies to



Peter Gøtzsche speaking at the HealthWatch AGM

trawled through a whole medical area and done a statistical overview, and we would soon find out that the phenomenon was not unusual at all. In 1997 my wife Helle, a clinical microbiologist, did a study on antifungal agents for people with, for example fever, cancer, or neutropenia, who were at risk of dying from a fungal infection. We did a routine comparison between fluconazole and Amphotericin B, the two most promising drugs at that time. We found that some of the trials were three-armed, with a third arm consisting of nystatin, which is effectively no more than a placebo. The manufacturer, Pfizer, had lumped the data from a drug that didn't work, with amphotericin B to show that their drug, fluconazole, was better than when you handicapped your comparator. What is more, they had also given amphotericin B by mouth, even though it is poorly absorbed and not prescribed orally with these patients. We tried to talk to the investigators about our results, and they referred us to Pfizer, who wouldn't answer our questions.¹ We couldn't even see whether one trial publication was re-using the same patients that were included in another trial publication, so we might be counting the patients twice. We asked Pfizer about that, too, and they didn't reply. We published it in JAMA² and Helle presented it at a conference on microbiology in Toronto in Canada. There were 800 people and her presentation went way over time, not because she over-ran, but because there were so many questions. Drummond Rennie, one of the JAMA editors, wrote in an editorial that "fluconazole raced against a heavily handicapped opponent".³ In a response letter to JAMA, Pfizer conceded that the comparison drugs did not work and that it would change how it reported results of trials.⁴

So, we ended up in the New York Times because we'd reported misleading research being published by the biggest drug company in the world.⁵ Two years later we were there again.⁶ My PhD student had studied the placebo effect. We'd thought it could be powerful, as did most doctors. But most doctors make the mistake of asking, what is the placebo effect? And then attempt to answer it by observing what happens to a group of patients treated with placebo. That is wrong. Think about regression to the

mean, and the way many conditions heal by themselves. Well, that is NOT placebo. To study placebo, you need to take an untreated control group, and compare that with the placebo group, then in most trials you can also have a third group, using an active drug. We collected results from 113 trials, we published in the New England Journal of Medicine and the Cochrane Library. We couldn't see much effect with placebo. Maybe a little effect on pain, but we didn't even know if it was a true effect because you cannot blind an untreated control group, and when you measure subjective effects people tend to hope that they'll get some benefits because they think they are receiving a drug. So, we couldn't find evidence for placebo effect. It was terrible for the placebo community and made a lot of work for us, dealing with questions and criticisms.

There is too much unreliable research published by people in order to sustain their erroneous beliefs. So it is fundamental that we try to persuade politicians that we cannot leave people to be their own judges. I can't go to the car inspection with my 18-year-old car and reams of paper and say, I've already done the inspections myself, no need for you to do it! Yet that is how we approve drugs.

“We were immediately called to a meeting. Two days later we were told that our paper was a non-paper. It didn't exist.”

I have worked a lot with psychiatric drugs, and I published a book last year on the subject,⁷ and there will be documentaries to follow. People are starting to realize that psychiatric drugs are not the solution to psychiatric problems, in fact they make them worse. They disable the brain. People may think it's useful that they do this because the effect is to sedate the patient, but they also cause many side effects. The clinical trials in psychiatry are the worst I have ever seen. And the more psychiatric drugs we use, the more people end up on disability pensions because they can't work. There is more and more pressure to establish helplines for people who want to come off psychiatric drugs, so things are moving in the right direction.

On mammography screening: I think it should be stopped. In 1999 a Swedish study compared regions which had taken up mammography screening early, and they compared them with other regions that hadn't implemented it yet. They couldn't find any difference in mortality.⁸ At that time we had screening in 20% of Denmark. The Danish Medical Association asked the Danish Board of Health, can't we trust the randomized trials which said the screening worked? That hot potato landed in my lap. We were asked to review the randomized trials of mammography screening. Five weeks after I had this assignment, there would be questions in Parliament about whether we should have screening.

We worked fast – in four weeks we had produced a report, with meta-analysis, and it concluded that we cannot exclude the possibility that mammographic screening does more harm than good. We took it to the National Board of Health and were immediately called to a meeting, with the result that two days later we were told that our paper was a non-paper. It didn't exist. This was a real “Yes, Minister” moment. Fortunately, we were able to prove that it really did exist, because we'd sent it to the Danish Board of Health by messenger and its delivery had been recorded! I was told to change my letter, to say there had been misunderstandings, and to say that the report was only preliminary. I didn't accept that. A promise was made to send it to the Minister of Health. It never arrived.

Two weeks later the scandal broke loose. Journalists got hold of both copies of the letters, my original and one that had been changed and which I had not signed. Both on a full page of the newspaper. As you all know, “Yes Minister” tells you how government discredits an unwelcome report. Step one – refuse to publish in the public interests, saying you are waiting for the results of a more detailed report, still in preparation. If there isn't one,

commission it! And that's what happened. We were told to prepare a Cochrane review about this, and our original report would not see the light of day. So, we did a little more work, we published our findings in the Lancet,⁹ then two years later we published the Cochrane review which, naturally, confirmed the original findings. But we were blocked.¹⁰ [Editor's note: the paper was removed completely from the journal website without any formal retraction. The authors later published it in the Danish Medical Bulletin¹¹] You can see why, when life gets tough, I like to watch “Yes Minister”.

I published another paper in the Journal of the Royal Society of Medicine last year, calling for mammography screening to be stopped.¹² What does breast cancer screening mean for total mortality? Mortality rates with and without mammography screening are identical. Except, of course, if you include deaths caused by screening overdiagnosis – if you do that, you find that screening increases mortality. Why deaths by overdiagnosis? Well, if you are diagnosed with breast cancer you get chemotherapy and radiotherapy, and that kills some women. Do you think you could have sold mammography screening if this was what you'd shown to the politicians 25 or 30 years ago? And because the NHS leaflet on breast screening was no good, we produced a new leaflet and published it in the BMJ, it's been translated into many languages and it's on our website.¹³

But of course screening – to investigate and find illnesses before people even know they are ill – is the best way to earn money, if you are a private doctor.

So I thought we should also look into health checks, looking at morbidity and mortality from disease. To our big surprise there were already 16 randomised trials with many participants and long follow-ups – 9 years – and almost 12,000 deaths, so much material! And what did we find? No effect whatsoever. Total mortality, around 1, and the same for cancer, cardiovascular mortality. We published in the BMJ.¹⁴ Then a huge Danish study was published after our review, that one included 3,000 deaths, and it didn't find anything either. Extensive screening for risk of ischaemic heart disease followed by repeated lifestyle counselling, a beautiful ten-year study that was also published in the BMJ.¹⁵ So there are no lives saved by screening but there is a lot of harm because you make diagnoses and then treat them with drugs that might make your patients impotent, etc., when they might never even have noticed the symptoms of the original condition or just put it down to old age.

Look at England – there is a universally applied health check for everyone aged 40-74. It was launched in 2009. The Department of Health argued that by spotting people who are at risk from heart attack, diabetes, stroke, kidney disease, these conditions could be prevented. Finally we'd had enough and wrote to the Times, who published on the front page to say that health checks are utterly useless.¹⁶ They now claim that, although the programme is not supported by direct evidence from randomized controlled trials, there is an urgent need to handle the growing burden of disease associated with lifestyle behaviours. Six months later, NICE was helping local authorities to encourage people to attend health checks and to support them making changes to improve their health.

Now, this is how the mob operates. You don't ask the boss questions. You just do what you are told, otherwise you might get a bullet in your head. NICE has prostituted itself to the politicians' message. This is a side of medicine that students aren't taught about.

I am kind of fed up with being introduced all over the world as controversial. Why is it controversial to tell what you find when you try to do good science?

Peter Gøtzsche's books include *Deadly Psychiatry and Organised Denial* (People's Press, 2015); *Deadly Medicines and Organised Crime: How Big Pharma has Corrupted Healthcare* (Radcliffe Publishing, 2013); and *Mammography Screening: Truth, Lies and Controversy* (Radcliffe Publishing, 2012).

The HealthWatch Award is presented annually to an individual who has made significant steps either in medical research or in improving the public's understanding of health issues by clarifying complicated and often misunderstood medical matters for the general public.

References

- Gøtzsche P. *Deadly Medicines and Organised Crime*. Radcliffe Publishing, London, 2013
- Krogh Johansen H, Gøtzsche PC. Problems in the Design and Reporting of Trials of Antifungal Agents Encountered During Meta-analysis. *JAMA*. 1999;282(18):1752-1759
<http://jamanetwork.com/journals/jama/fullarticle/192088>
- Rennie D. Fair Conduct and Fair Reporting of Clinical Trials. *JAMA*. 1999;282(18):1766-1768
<http://jamanetwork.com/journals/jama/fullarticle/192075>
- Panzer H. Improving the Conduct and Reporting of Clinical Trials. *JAMA*. 2000;283(21):2787-2790
<http://jamanetwork.com/journals/jama/fullarticle/1030783>
- Grady D. Medical Journal Cites Misleading Drug Research. *New York Times*, 10 Nov 1999
<http://www.nytimes.com/1999/11/10/us/medical-journal-cites-misleading-drug-research.html>
- Kolata G. Placebo Effect Is More Myth Than Science, Study Says. *New York Times*, 24 May 2001
<http://www.nytimes.com/2001/05/24/us/placebo-effect-is-more-myth-than-science-study-says.html>
- Gøtzsche P. *Deadly Psychiatry and Organised Denial*. People's Press, London, 2015
- Sjönell G, Ståhle L. Hålsokontroller med mammografi minskar inte dödlighet i bröstcancer. *Läkartidningen* 1999; 96: 904–13.
- Gøtzsche PG, Olsen O. (January 2000). "Is screening for breast cancer with mammography justifiable?". *Lancet* 2000;**355**:129-134 [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(99\)06065-1/abstract](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(99)06065-1/abstract)
- Zahl PH et al. WITHDRAWN: Results of the Two-County trial of mammography screening are not compatible with contemporaneous official Swedish breast cancer statistics. *European Journal of Cancer* 2006 Mar 9 [epub ahead of print] <http://www.ncbi.nlm.nih.gov/pubmed/16530407>
- Zahl PH et al. Results of the Two-County trial of mammography screening are not compatible with contemporaneous official Swedish breast cancer statistics. *Danish Medical Bulletin* 2006;53:438–440
http://web.archive.org/web/20070621235925/http://www.danmedbul.dk/Dmb_2006/0406/0406-artikler/DMB3890.htm
- Gotzsche PG. Mammography screening is harmful and should be abandoned. *J R Soc Med* 2015 Sep;108(9):341-5.
<http://journals.sagepub.com/doi/abs/10.1177/0141076815602452>
- Nordic Cochrane. Mammography screening leaflet, 2012.
<http://nordic.cochrane.org/mammography-screening-leaflet>
- Krogsbøll LT et al. General health checks in adults for reducing morbidity and mortality from disease: Cochrane systematic review and meta-analysis. *BMJ* 2012;345:e7191.
<http://www.bmj.com/content/345/bmj.e7191.long>
- Jørgensen T. Effect of screening and lifestyle counselling on incidence of ischaemic heart disease in general population: Inter99 randomised trial. *BMJ* 2014;348:g3617
<http://www.bmj.com/content/348/bmj.g3617>
- Smyth C. NHS checks on over-40s condemned as 'useless'. *The Times*, 20 August 2013
<http://www.thetimes.co.uk/tto/health/news/article3847530.ece>

Students

Report of the 2016 Student Prize

What chance does the public have when even trained health professionals find it hard to interpret the results of new research? Our future doctors and nurses deserve the best possible training in what proper scientific testing entails, so to judge how best to care for their patients.

For the last 15 years the HealthWatch Student Prize competition has been gaining insight into the way our future healthcare professionals are learning to distinguish between good-quality research and poorly designed studies. Each year students are invited to appraise four hypothetical research protocols and to rank them according to which is most likely to provide a reliable answer to the stated aim of the trial. The protocols are designed to contain scientific, methodological and ethical flaws. Students have to write a short essay to explain their reasons for assigning their ratings and suggest ways in which the protocols could be improved. This year's competition comprised studies to test a lotion for spot reduction of subcutaneous fat; moxibustion for breech presentation; calf's foot jelly for osteoarthritis; and castor oil to treat baldness.

The competition is open to all medical, dental, nursing and midwifery students, and students of professions allied to medicine, in the UK. To qualify for a prize, students must achieve at least 70% of the maximum possible score, based on correctly commenting on the presence or absence of key protocol design features. Winners receive a cheque for £500, and there is £100 for each of up to five runners-up.

This year's results were most disappointing in that only 67 entries were received, of which a mere 8 (12%) had placed the protocols in the correct order. All 8 correct entries came from students of Medicine and Dentistry, but sadly none from Nursing/Midwifery students or from students of professions Allied to Medicine.

Despite the four protocols having been deliberately designed in a manner that showed a clear distinction in the quality of the study-designs, it is of concern that so few entrants succeeded in ranking them correctly. Moreover, even among those who did so, only 4 (50%) achieved the minimum number of points required to qualify for a prize. As in earlier years, many failed to notice the lack of informed patient consent or ethics committee clearance in some of the protocols, or the absence of key features, such as control group, patient or investigator blinding, or clearly defined outcome measures, to name but a few. These disappointing results point to the need for much better education of healthcare professionals about evidence-based treatments, including how to critically appraise research findings and spot weaknesses in their protocol designs, if we are to protect the public from ineffective or possibly harmful treatments.

To the winner and runners-up, we extend our admiration and heartfelt congratulations and wish them well in their careers. They are:

Winner

Emma Mills, student of medicine at the University of Aberdeen

Runners-up

Dylan Rakhra, student of dentistry at the University of Bristol

Yuan Ye Beh, student of medicine at the University of Aberdeen

Mitchell Burden, student of medicine at the University of Sheffield

Highly Commended

Howell Fu, student of medicine at the University of Oxford

Musammad Rashida Begum, student of medicine at Barts and The London School of Medicine

Avirup Chowdhury, student of medicine at the University of Glasgow

Grace Petkovic, student of medicine, University of Oxford

We were delighted to meet those that came to receive their prizes from our president Nick Ross at the HealthWatch AGM on 20 October 2016. Our thanks go to Cambridge University Press for having sponsored the 2016 competition and to David Bender, Walli Bounds, and John Kirwan for their administrative and scientific contributions.

*Walli Bounds, SCM, Hon.FFSRH
Student Prize Committee, HealthWatch*



Pictured, from left to right: Emma Mills, Dylan Rakhra and Grace Petkovic after receiving their awards at the AGM

Book review

Homeopathy – the undiluted facts

By Edzard Ernst: Springer; 1st ed. 2016 edition (5 Oct. 2016). Paperback: 164 pages

We all know homeopathy doesn't hold water, but over two hundred years it has had a prodigious hold on a lot of intelligent people – including Edzard Ernst. As he points out from the start of this splendidly approachable guide, he was a practitioner himself and, “millions of patients and consumers swear by homeopathy and employ its remedies on a daily basis.”

Of course millions of others denounce it as preposterous, antiscientific nonsense – and what makes this such a good book is that Edzard is empathetic to both sides of the argument. What makes it exceptionally useful is that so much is packed into a little paperback (150 pages including index). It properly defines homeopathy (and notes how widely its definition can be stretched), narrates the story of its eccentric but brilliant founder Christian Hahnemann, runs through the scientific arguments for and against Hahnemann's ideas and, as if that is not enough, it provides a comprehensive lexicon which will become the classic first-choice reference on the subject.

Given Prof Ernst's formidable reputation as an opponent of quackery and pseudoscience, you might expect undiluted criticism. Instead, this is text book objectivity. Of course you won't think that if you're a homeopathic devotee, and certainly he doesn't water down any of his criticisms, especially when he wades through spurious arguments advanced by some proponents of homeopathy. Yet diehard critics of homeopathy will be disappointed too, especially if they are hoping for a hatchet job. Edzard acknowledges that Hahnemann was no fool. Eighteenth

century medicines were often undiluted poisons, so his idea that 'less is more' was much kinder to his patients. And when people are unwell (or even well but worried), prescribing water with the promise of a little magic can do good.

Drip, drip, drip, there are signs that homeopathy's hold in the United Kingdom is slowly draining away. The Nightingale Collaboration has been charting its demise in the NHS, and David Colquhoun been tracking (as well as promoting) the decline of homeopathic courses at British universities. But the royal family still believes in it (at least nominally, the Queen has her own homeopathic physician) and homeopathy is having on bull run in France and in many other parts of Europe.

Homeopaths boast that their craft is formally recognised as a medical treatment in around 40 countries – and, scandalously, or triumphantly depending on your point of view – by the World Health Organisation .

Apparently less is not more when it comes to homeopathy itself. So this book should sell well.

Nick Ross, Journalist, author and broadcaster, London

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Letters and articles for publication are welcomed and should be sent to the Editor at: newsletter@healthwatch-uk.org For our requirements please see <https://www.healthwatch-uk.org/newsletter/information-for-authors.html>

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We stand for

- The assessment and testing of all medical and nutritional treatments, products and procedures
- Consumer protection in regard to all forms of health care
- The highest standards of education and evidence-based health care by practitioners
- Better understanding by the public and the media of the importance of application of evidence from robust clinical trials

We are against

- Misleading advertising of health products
- The sale of unproven remedies to the vulnerable and desperate
- Unethical marketing by pharmaceutical companies
- Misconduct in clinical trials
- Media misinformation on health and nutrition
- Government promotion of health and screening programmes unsupported by evidence

Our activities include public debates, awards, a student competition, and this quarterly newsletter. HealthWatch welcomes membership enquiries from those who share its aims. Join at <https://www.healthwatch-uk.org/about/join-healthwatch.html>



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