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Newsletter 80 January 2011

HEARTWARMING NEWS ON A COLD DAY

ON THE ICY final day of November, Dr Peter Wilmshurst appeared in the London High Court for the latest development in his libel case with US medical device manufacturer NMT Medical. They attended a Security for Costs hearing, which would determine whether the US-based corporation that are suing Dr Wilmshurst would have to pay money into court in London to guarantee that they will pay his costs if he wins the case. Wilmshurst, consultant cardiologist at the Royal Shrewsbury Hospital, has been fighting since 2007 to defend his comments about a clinical trial of an NMT device.¹ His costs have already exceeded £250,000. Losing the case could mean he loses his house. HealthWatch's John Garrow braved the snow to be at the High Court in London to report on the case that has helped spark a national campaign to reform England's libel laws.



The High Court is a huge building on the north side of the Strand. It needs to be highly organised, because it houses 88 court rooms, to one of which any complainant or defendant must find the way and arrive punctually. For people (like me) who have never been there before there are excellent route guides printed in large type. I was given one of the "FEES/QUEENS BENCH OFFICES: East Block" guide sheets, which was a model of clarity.

My route involved 10 instructions: "Go up large staircase", "Top of stairs turn left", "Go on through double doors", etc. I felt like a live actor in a computer game. I was relieved when I found room E112 in good time. This is the lair of Master Foster, who would decide if Peter Wilmshurst is entitled to security of costs (paid by NMT), and if so how much, and paid by when?

"I had the impression the company's lawyer thought bankruptcy of NMT would be a far greater catastrophe than bankruptcy of Peter Wilmshurst."

At the appointed time (10.30) we all trooped in to a very well-lit room with a huge desk in the middle. Master Foster sat on the far side, the four lawyers (two for each side) sat facing him. Peter himself sat just off to the left side of the table where he was available to answer questions.

The Public sat on a row of chairs against the wall, also facing the Master. They were Peter's wife and daughter; Dr Evan Harris—spokesman for the Campaign for Libel Reform and, until recently, Liberal MP—who silently pecked at a small hand-held digital miracle; three men from the BBC who had left their photographic equipment outside; a young lady representing the charity Sense about Science, and me.

The proceedings were wonderfully civilised and free from any showing off or pageantry. It was inaudible to me, since Peter's solicitor Mark Lewis spoke softly to the Master with his back to the

Public. I noticed that the Master was wearing a hearing aid (as I was) and he evidently heard what was said. It was agreed that the issue for this hearing was solely about money—the merits of the libel claim were not to be considered at this hearing.

The lawyer for NMT spoke more loudly, and explained to the Master that NMT finances were in a perilous state, so they would be unable to pay any substantial sum without risking bankruptcy. I had the impression he thought bankruptcy of NMT would be a far greater catastrophe than bankruptcy of Peter Wilmshurst. Evidently there is a rule that you cannot claim security of costs if you wait too long, but Master Foster was not buying that argument. He consulted the data of the course of the trial, and concluded that the long delays had been created by actions of the complainant, not the defendant, so they could not now be used to disqualify the defendant of the right for security.

Master Foster ruled that NMT Medical must lodge £200,000 security by 18 January 2011. If they failed to do so the case would be struck out and the court would decide how much of Dr Wilmshurst's costs the company must pay.

It was still very cold outside, but we went home cheered by the thought that the end is now nigh.

*John Garrow
Emeritus Professor of Human Nutrition
University of London*

Reference

1. Dyer C. Cardiologist is sued for comments on potential migraine device. *BMJ* 2008; **337**: a2412. See <http://www.bmj.com/content/337/bmj.a2412.extract>

Footnote: NMT Medical have now threatened to sue Peter Wilmshurst for libel again over comments he made about his case in a BBC Radio 4 Today Programme piece on the way that England's libel laws inhibit scientific and medical discussions. See <http://www.bbc.co.uk/news/science-environment-11678725>

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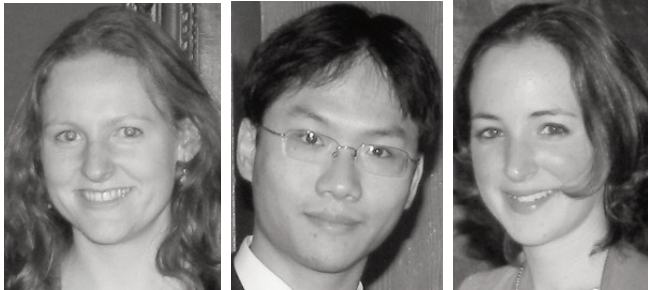
news

PRIZES AT 2010 HEALTHWATCH AGM

THIS YEAR'S HealthWatch AGM was well attended as usual, and the committee welcomed a number of guests including our patron Lord Dick Taverne and his wife. In front of a packed hall at the Medical Society of London, Nick Ross presented this year's HealthWatch Award to Professor David Colquhoun for his tireless exposure of "improbable science", much of which activity takes place on his internet blog of the same name. For those members who could not join us, you can enjoy an article based on his talk on pages 4 and 5 of this issue.

Another distinguished guest was Elizabeth Pygott of the Medico-Legal Society, generous sponsors of the HealthWatch Student Prize for evaluation of clinical research protocols. The annual competition is open to medical and nursing/midwifery students.

Siôn Edryd Williams (pictured right) of Cardiff Medical School took this year's first prize of £500. Runners up pictured below were Sarah Sneller (Cardiff Medical School); Kenneth Chan (Barts and the London School of Medicine and Dentistry) and Claire Parke



(Aberdeen Medical School). The two other runners-up, Ross Mirvis (Imperial College Medical School) and Corinne Locke (Cardiff Medical School) could not attend. Kenneth Chan has joined the committee as a student member. The second year medical student said he hopes to become involved in research, adding, "I learned a lot from taking part in the competition, because it helped me get an idea of some of the many different aspects that have to be considered when planning a trial."

Walli Bounds congratulated all the winners for the very high standard of their entries, but noted that a surprising number of the other entrants failed to spot major faults in the test protocols, including the lack of ethics committee approval. "The competition has highlighted a need for much better teaching," she said.

Mandy Payne



Coalition says NICE review of homeopathy "unlikely"

THE COALITION government has again rejected calls for an official review of homeopathic remedies, saying that such a review in the near future is not "appropriate". A petition to HM Government which closed in June called for the National Institute for Clinical Excellence to investigate urgently, "why scarce NHS resources are being committed to this seemingly unproven form of treatment."

The response appeared on 6th December¹ and referred petitioners to the government's July statement², adding only that NICE, "already has a full work programme that Ministers have referred to them, which focuses on reviewing evidence to support the development of authoritative guidance where appropriate, and is therefore unlikely to initiate a review on homeopathy in the near future." James May, HealthWatch chairman, commented, "My understand-

ing is that NICE is going to have less authority in the future arrangement as GP commissioning groups are going to have greater freedom to decide how to spend their money. GPs I think are not generally pleased about this, because this means that whereas NICE has taken flack in the past, GPs (who unlike NICE are a personal face) will face heavy criticism for making these decisions, and there will be more of a post-code lottery."

Mandy Payne

References

1. See <http://www.hmg.gov.uk/epetition-responses/petition-view.aspx?epref=NHSHomeopathy>
2. See www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_117810

NEWS IN BRIEF

PRIZE-WINNING Aussie sceptic Loretta Marron warns of the potential dangers of breast imaging devices offered at private clinics. Clinics offering imaging technologies such as thermography as pain-free alternatives to mammograms could mislead consumers, who might mistakenly believe the scans can detect cancer. Thermography is also being offered at private clinics in the UK.

Crikey bulletin, 26 October 2010

See <http://www.crikey.com.au/2010/10/26/concerns-raised-over-alternative-breast-cancer-screening-devices/>

AND THERE'S more about screening. Recommended for online viewing is a half hour public lecture given by Michael Baum recently at University College London, where he is professor emeritus of surgery. He argues that the NHS breast screening programme may do more harm than good, and he believes women are not being told the truth.

See <http://tinyurl.com/2urbjq2>

SENSE ABOUT SCIENCE have published a free online guide to

libel law for bloggers, which explains how to spot if a letter is a serious threat or a bluff; how to respond and when to take challenged material down. The six-page leaflet is not a substitute for individual legal advice but is packed with invaluable wisdom.

See <http://www.senseaboutscience.org.uk/PDF/So%20youve%20had%20a%20threatening%20letter.pdf>

THE 10:23 CAMPAIGN, who promote scientific information about homeopathy (<http://www.1023.org.uk/>), have posted a short programme on YouTube in which they prepare and market-test a homeopathically-prepared, vodka-based lifestyle drink.

See <http://youtu.be/gZO9J7dDLU4>

THE NIGHTINGALE Collaboration is a new group, led by science writer Simon Singh, formed to challenge misleading health claims, and to pressure organizations that represent CAM practitioners to develop robust codes of conduct that are rigorously enforced. The collaboration seeks volunteers...

See <http://www.nightingale-collaboration.org/>

SUCCESSES, AND SOME SETBACKS

WE HAVE had a busy and, on balance, successful year, though not without considerable setbacks. I am as ever very grateful to everyone who has contributed to the work of HealthWatch over the past year and in particular to the work of the committee. Keith Isaacson is our vice chairman, and Gillian Robinson has been our secretary who is resigning from this post this year, but remaining on the committee. I am very grateful for all her work over several years.



Anne Raikes looks after our finances, and other members are David Bender, Susan Bewley, Walli Bounds, Diana Brahams, Malcolm Brahams, John Illman and Les Rose; and Vincent Marks was co-opted onto the committee. With are very sorry that both John Garrow and Caroline Richmond will stop serving on the committee this year. John is the longest standing HealthWatch committee member who has contributed his wisdom and devastatingly incisive wit and clarity of thought to meetings and to the newsletter. Caroline was one of the founder members of HealthWatch who first conceived of the need to challenge the increasing numbers of bogus health claims in the eighties and nineties. She is one of a rare breed of journalists who truly understands and can communicate science to the public. She is rarely short of ideas and wisdom. Fortunately both will continue to contribute to committee e-mail discussions as well as the Google group, but we will inevitably feel the loss and wish them both well.

In addition to our committee members we are very grateful to Ken Bodman our membership secretary.

The newsletter has continued to be a high quality publication thanks to Mandy Payne's editorial skills and to Caroline Addy who is the barrister who reads the text for libel, for which we on the committee are very grateful indeed. The newsletter is circulated to journalists and members of HealthWatch.

The student prize is awarded for the ranking of clinical protocols to promote skills in evidence-based medicine amongst medical and nursing students. We are very indebted to Walli Bounds and Gillian Robinson for producing the protocols and for deciding on winning entries. We are also grateful to David Bender for publicising the prize.

The website is well used and continues to be one of the first results on a Google search for the term "HealthWatch", even now that the present government has given a new quango our name (despite our many protests).

We are also very grateful to members who contribute to the work of HealthWatch—for their newsletter articles, Google group contributions and taking part in any of a variety of projects which we are involved in. Being a member of the Google group is a good way of keeping up to date and finding out how you can help us in achieving our aims.

As I suggested at the beginning there have been considerable challenges in the last year.

Edzard Ernst and the Prince of Wales

The biggest blow came early in the year with the news that Edzard Ernst's department of Complementary Medicine faces closure. On the 3rd of March *The Times* reported that, "One of the world's leading centres for alternative medicine research is facing closure for lack of money after a row with a senior aide to the Prince of Wales." The exact nature of this intervention is not clear.

Less than two months later *The Times* (1st May) reported. "A charity founded by the Prince of Wales to promote a holistic approach to medicine and greater use of homeopathic treatments is being shut down, it was announced yesterday, days after a former senior official was arrested in a fraud investigation."

The Prince's foundation has been at the forefront of promoting alternative medicine in the face of the evidence and we are not sorry to see it close, but the loss of the enormous output and influence of

high quality research by Edzard's department means is great blow.

Simon Singh, Peter Wilmschurst and Libel Laws

In April the British Chiropractic Association dropped their libel case against science writer Simon Singh. The case highlighted the need for reform of UK libel laws, and HealthWatch members wrote to MPs and signed a petition for reform which is currently under review. For information see: <http://www.libelreform.org/>

We continue to support Peter Wilmschurst with our whistleblowers support fund in defending a libel case from NMT medical (read about developments on the opposite page).

It is apparent that even if the whistleblower wins his case he is unlikely to be able to claim more than about 70% of very substantial costs, and cannot claim at all for the enormous time and stress involved over months and years. For these reasons we will continue to run our support fund for Peter and others like him who the committee feels merit such support.

Science and Technology Committee and the New Government

Despite their pre-election claims to support evidence-based medicine, the coalition government ignored the advice of the Science and Technology Committee's report on Homeopathy and have decided not to close existing services, and to allow individual clinicians to refer to homeopaths if they feel this is helpful. Yet they assert that clinicians are bound to the GMC's code of conduct and that therefore they are responsible for prescribing evidence-based and cost-effective medicine. HealthWatch members wrote to Andrew Lansley and other MPs to point out that this is an irresponsible use of public money in a time of financial cutbacks, but our arguments were comprehensively ignored by those in power.

Breast Screening

After a review in the *British Medical Journal* pointed out the many difficulties with the national breast screening programme, HealthWatch—under the lead of Michael Baum and Hazel Thornton—have had a letter published in *The Times* asking that the public be offered informed choice regarding the programme rather than the uncritical information currently supporting it.

The Consumer Protection Scandal

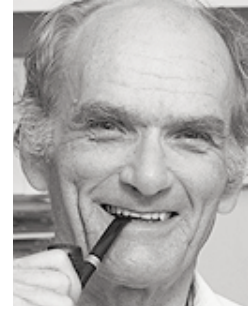
John Garrow and Les Rose used the Freedom of Information Act to discover that since the introduction of the new structure for Trading Standards complaints was introduced in 2008 there have been no prosecutions for misleading claims for health products. Les put together a protocol for a study to test the effectiveness of Trading Standards under the current system, in which 15 participants complained about 3 products which have unsubstantiated claims. The trial is ongoing and is producing very interesting responses from the vendors of the products and from Trading Standards officials.

This is a brief selection of some highlights from the past year. Most of these items and others have been reported in the newsletter. There is a constant need for help from HealthWatch members who can easily join the Google group and become actively involved in some of these projects.

James May
Chairman of HealthWatch

2010 HealthWatch awardwinner

HOW THE WEB HAS TURNED THE TABLES ON PSEUDO-SCIENCE



HEALTHWATCH NEWSLETTERS go back to long before the recent proliferation of “skeptical blogs”. As far back as 1991, Issue 8 (Oct/Dec 1991) included an article about the use of the Vega Test to diagnose allergy. Since then the Vega test has been debunked again and again—for example in the BBC’s Inside Out programme in 2003,¹ and three years later as “The great allergy con” in the *Daily Mail*.²

Shortly afterwards I wrote about the test on my blog³, when I discovered it being offered at the private practice of a practitioner who had himself written a paper saying it didn’t work. And only a few days ago it was exposed on the BBC yet again, this time on Watchdog.⁴ Outrageously, consumer protection laws seem not to be being implemented in this country.

Outrage about pseudoscience is not new. Alfred Joseph Clark FRS held the established chair of Pharmacology at University College London from 1919 to 1926, when he left for Edinburgh. In 1938 he quoted, in his short book “Patent Medicines”, from a House of Commons Select Committee report on Patent Medicines that had been submitted to the House 24 years earlier:⁵

“For all practical purposes British law is powerless to prevent any person from procuring any drug, or making any mixture, whether patent or without any therapeutical activity whatever (as long as it does not contain a scheduled poison), advertising it in any decent terms as a cure for any disease or ailment, recommending it by bogus testimonials and the invented opinions and facsimile signatures of fictitious physicians, and selling it under any name he chooses, on payment of a small stamp duty. For any price he can persuade a credulous public to pay.”

His son relates what happened next, in his own memoir.⁶

“To AJ’s surprise and dismay he was sued for libel by a notorious rogue who peddled a quack cure for for tuberculosis. This man said that AJ’s remarks (such as “‘Cures’ for consumption, cancer and diabetes may fairly be classed as murderous”) were libellous and would damage his business. AJ was determined to fight, and he and Trixie decided to put their savings at stake if necessary. The BMA and the Medical Defence Union agreed to support him and they all went to lawyers. He was shocked when they advised him that he would be bound to lose for he had damaged the man’s livelihood! Finally, after much heart searching, he made an apology, saying that he had not meant that particular man’s nostrum.”

So are we making progress? After the irrationality of the 1960s the tide is beginning to turn. Today journalists know that if they write nonsense they’ll be dumped on fairly quickly by bloggers like Ben Goldacre (www.badscience.net), Quackometer (www.quackometer.net) and Gimpyblog (<http://gimpyblog.wordpress.com>). But there’s still a long way to go, especially when our academic institutions continue to promote non-science.

The University of Westminster runs eleven alternative medicine degrees with titles including herbalism, chinese medicine, nutritional therapy, acupuncture and naturopathy. Middlesex University offers degrees in ayurveda, herbalism, traditional chinese medicine and acupuncture. Edinburgh’s Napier University offers degrees BA (Hons) in aromatherapy and reflexology (although the herbal medicine qualification disappeared after my enquiries under the Freedom of Information Act).

Wales is another example. The University of Wales Institute in Cardiff offers four degrees in complementary therapies, holistic massage, clinical aromatherapy and reflexology. Glyndŵr

University offers degrees in traditional chinese medicine, reflexology and aromatherapy. And the University of Glamorgan offers two degrees in chiropractic.

Two years ago Polly Toynbee, writing in the Guardian,⁷ questioned the spending of public funds on alternative therapies and complained that the policy encouraged, “the burgeoning number of degrees and diplomas in complementary therapies offered by universities, such as the Thames Valley, Westminster or the University of Wales. Normal academic standards have been set aside for attracting new students. Legitimate fears that this gave a phoney scientific aura to humbuggery of all kinds are now proved right.” She duly received a letter from vice-chancellor and chief executive of the University of Wales, Professor Marc Clement, who invited her to the University to meet the validation staff so she could see for herself how their validation and monitoring procedures are applied and so to reassure herself regarding the academic standards.

In fact much information about the validation of courses at the University of Wales is readily available but I don’t know whether Ms Toynbee would be reassured by some of the information I’ve come across. On the university’s website, under the heading, “The Validation Unit”,⁸ we read,

“While the majority of the University’s students study in Wales, there is also an important international dimension to its work. It has in place a very successful and highly regarded international validation operation, which enables overseas institutions to offer the University of Wales degree at an equivalent standard to the degree offered in Wales itself.

“Validation is important in fostering links between Wales and other countries ... In 2008, more than 20,000 students were registered on validated courses of the University of Wales in 30 countries, covering a wide variety of academic disciplines.” In economic terms, it continues, “it is a significant export, each year generating overseas earnings of well over £2 million.”

“I assumed that the accreditation committee would know what was taught, but the answers to my enquiries suggested not only that they didn’t but that they hadn’t even seen a detailed timetable.”

But what is actually taught on these external courses? One course, though accredited by the University of Wales, was actually taught at the Northern College of Acupuncture in York. That is private and so not covered by the Freedom of Information Act (an increasing problem). I assumed that the accreditation committee would know what was taught, but the answers to my enquiries suggested not only that they didn’t but that they hadn’t even seen a detailed timetable. In June 2007 a press release promoted the new diploma/MSc course.

“The course uniquely combines the study of Western, naturopathic and traditional medicine approaches to nutrition—the best of East meets West—together with actual clinical practice of nutritional therapy. It covers the nutritional approach to a wide range of ailments, from acne to urinary infections and also incorporates meal

2010 HealthWatch awardwinner

planning, health foods, food preparation and nutritional research.”

Guest lecturers include Dr John Briffa, Professor Jane Plant MBE, and Patrick Holford. The course leader was clinical psychologist Jacqueline Young, author of “Complementary Medicine for Dummies”,⁹ who was famously quoted by *The Guardian*’s “Bad Science” columnist Ben Goldacre^{10,11} saying, “Implosion researchers have found that if water is put through a spiral its electrical field changes and it then appears to have a potent, restorative effect on cells.” Elsewhere she is said to recommend taking an “air bath”—“stand naked in a room at home or in your garden and walk around exposing your skin to different air flows and temperatures ... do light exercises or skin brushing ... continue walking for five to ten minutes but don’t let yourself get cold.”

“The university may be satisfied with what is taught about McTimoney Chiropractic. But the McTimoney Chiropractic Association, it seems, is not.”

The accreditation committee seemed quite unaware of this information. On 26 October 2008 my enquiries to the University of Wales resulted in a reply from its chair, Professor Nigel Palastanga, who wrote, “I personally am not familiar with her book and nobody on the validation panel raised any concerns about it ... we would have considered [her CV] as presented in the documentation as part of the teaching team. In my experience of conducting degree validations at over 16 UK Universities this is the normal practice of a validation panel.”

The vice-chancellor, Marc Clement, failed to respond when I asked his opinion, as an engineer, of statements like, “Implosion researchers have found that if water is put through a spiral its electrical field changes and it then appears to have a potent, restorative effect on cells.”

In 2008, Palastanga was promoted to pro-vice-chancellor with responsibility for quality of teaching, and this year Jacqueline Young was awarded a teaching Fellowship at the University of Wales.

The University of Wales validates no fewer than 11,675 courses altogether. Many of these are regular courses in universities in Wales, but they also validate 594 courses at non-Welsh accredited institutions, an activity that earned them £5,440,765 in the financial year 2007/8. It does seem a bit odd that St Petersburg Christian University, Russia, and the International Baptist Theological Seminary, Prague, should be accredited by the University of Wales. They also validate the International Academy of Osteopathy, Ghent (Belgium), the Osteopathie Schule Deutschland, the Istituto Superiore Di Osteopatia, Milan, the Instituto Superior De Medicinas Tradicionales, Barcelona, the Skandinaviska Osteopathöskolan (SKOS) Gothenburg, Sweden and the College D’Etudes Osteopathiques, Canada. The 34 UK institutions include the Scottish School of Herbal Medicine, the Northern College of Acupuncture and the McTimoney College of Chiropractic.

My Freedom of Information enquiry into the McTimoney course produced tons of accreditation documents but no teaching materials, on the grounds that they didn’t possess them. Only McTimoney had them. The University’s Freedom of Information officer replied, “The University is entirely clear about the content of the course but the day to day timetabling of teaching sessions is a matter for the institution rather than the University and we do not require or possess timetable information. The Act does not oblige us to request the information but there is no reason you should not approach McTimoney directly on this.”

So the university doesn’t know the timetable. It doesn’t know what is taught in lectures, but it is “entirely clear about the content of the course.”

The university may be satisfied with what is taught about McTimoney Chiropractic. But the McTimoney Chiropractic Association, it seems, is not. On 8 June 2009 they sent a letter to their members urging them to take down their websites immediately because of fears that they might include unsubstantiated claims. They wrote, “If you have a website, take it down NOW.” The General Chiropractic Council itself, under pressure from over 600 complaints against its members, changed its mind in May 2010 about the very heart of the chiropractic myth, ‘subluxation’.¹² The chiropractic vertebral subluxation complex is an historical concept but it remains a theoretical model. It is not supported by any clinical research evidence that would allow claims to be made that it is the cause of disease or health concerns.

This overturns much of what is taught to chiropractors. How did the University of Wales manage to miss it when accrediting the course? Why has the The Quality Assurance Agency for Higher Education not acted? Why has Universities UK (UUK), which represents UK university vice-chancellors, done nothing about it?

Could it be that they have been overtaken in the matter of intellectual integrity by what Ben Goldacre has called the “ragged band of bloggers”? The advent of the web has allowed anyone to be their own science journalist. Since about 2000, when Goldacre started to write his Thursday “Bad Science” column in *The Guardian*, there has been a rapidly increasing number of “skeptical bloggers”. Any journalist who writes rubbish can expect very rapid debunking. Now even the tabloid press have (some) good science. The web (together with the Freedom of Information Act) has made it very difficult to keep secrets. That is almost always a good thing.

David Colquhoun

Professor of Pharmacology, University College London

References

1. BBC Inside Out - South: Monday 17 February 2003. See http://www.bbc.co.uk/insideout/south/series2/food_sensitivity_allergy_vega_tests.shtml
2. Dovey C, The great allergy con. *The Daily Mail*, 7 March 2006. See <http://www.dailymail.co.uk/health/article-379166/The-great-allergy-con.html>
3. David Colquhoun’s Improbable Science blog, 5 July 2006. See <http://www.dscience.net/?p=131>
4. BBC Watchdog: Monday 18 October 2010. See http://www.bbc.co.uk/blogs/watchdog/2010/10/food_intolerance.html
5. Clark AJ. Patent Medicines. Published by FACT, London WC2, 1938. See <http://www.dscience.net/?p=257#more-257>
6. Clark D. Alfred Joseph Clark. A memoir. C & J Clark Ltd, 1985. See <http://www.dscience.net/?p=257#more-257>
7. Toynbee P. Quackery and superstition—available soon on the NHS. *The Guardian*, Tuesday 8 January 2008. See <http://www.guardian.co.uk/commentisfree/2008/jan/08/politics.publicservices>
8. The Validation Unit, on the website of the University of Wales. See <http://www.wales.ac.uk/en/AboutUs/Structure/ValidationUnit.aspx>
9. Young J. *Complementary Medicine for Dummies*. Published by John Wiley & Sons, 13 July 2007.
10. Goldacre B. What is an implosion researcher? Or an electric field of water? Dr Arbutnot would like the BBC to say. *The Guardian*, Saturday 24 September 2005. See <http://www.guardian.co.uk/science/2005/sep/24/badscience>
11. Goldacre B. Oh, what a tangled web is being woven on the BBC health site. *The Guardian*, Saturday 1 October 2005. See <http://www.guardian.co.uk/science/2005/oct/01/badscience>
12. General Chiropractic Council. Advice on the research base for the chiropractic vertebral subluxation complex. See: http://www.gcc-uk.org/files/page_file/C-120510-11.pdf

evidence



DOES SCEPTICISM HELP YOU PASS MED SCHOOL EXAMS?



JUST AS much clinical practice rests comfortably, and sometimes uncomfortably, on a base of studies and statistics, there is now both current and emerging evidence regarding how to pass exams. The majority of medical written examinations today, whether undergraduate or postgraduate, take the form of multiple choice (MCQ) or extended matching questions (EMQ). The traditional essay paper has been gradually replaced with this newer structure of assessment in an attempt to alleviate examiner bias, improve analysis and comparison of raw data, and to decrease workload.

Many students believe that answer changing in multiple choice examinations results in an increased number of wrong answers rather than an improved score.^{1,2} They may resort to pattern recognition in those questions where they are unsure of the answer: following gut instinct. Too fearful to study the question too hard, or to think too deeply about its implications, examinees can commonly and irrationally stick with the first answer that comes to mind. Yet several studies over the last decade have demonstrated that answer changing in multiple choice examinations is generally beneficial to the examinee, with an observed predominant change in answers from wrong to right with this approach.¹

With the present examination approach of MCQs and EMQs, students often feel impelled to guess if they are not sure. This is a problematic factor of this type of assessment which does not translate well to the medical domain, where in clinical scenarios knowledge of your own limitations combined with evidence-based and confident decision-making are the principles that maintain patient safety. Attempts to alleviate this problem in test papers were originally made by providing a “don’t know” answer option to true/false questions and subsequently assessing answers in a negatively marked fashion, i.e., correct answers minus incorrect answers provided the total score with “don’t know” answers resulting in no marks. When this format was used students were demonstrated to perform better when they were instructed to attempt all questions.^{3,4} Hence, success in negatively marked MCQs required both knowledge and technique. But more recently, assessments have moved away from this format to a correct-answer-only scoring system.⁵

“this problem of student preference for the safety of shallow water grows into significance when you think that these are tomorrow’s doctors...”

Just as many medical students may fear over-analysing multiple choice questions, they may be similarly apprehensive of the scientific paper or clinical trial. As the full paper seems to be a word salad of methodology and statistics, the medical student is drawn to the abstract. If feeling confident, maybe the student will glance also at the conclusion, in the hope that this will provide a key reference for their article, or an intellectual remark to be used in their problem-based learning tutorial. Yet, when pressured for time or when one’s analytical ability is overstretched, often little attention is paid to how these conclusions came to be drawn or to the results from which the abstract arises. A student instead may place faith in the journal’s peer review process, hoping that the conclusions generated are justified and that the statistics and methodology used have been rigorously assessed. However, publication alone does not signify reliability.

On the surface this appears an insignificant problem. What does it matter that one reference in an undergraduate’s “Acute Coronary Syndrome” essay is based on poor scientific evidence? So what if a medical student’s patient study focuses on inferences generated by a biased methodological approach? Not much! Yet this problem of

student preference for the safety of shallow water grows into significance when you think that these are tomorrow’s doctors, our future prescribers and healthcare advisors. When a tired and frustrated chronic neck pain sufferer, who has spent years bouncing from one specialist to another, says to his GP, “I’ve tried everything on the NHS. Now what do you think about chiropractic?”, who would you prefer to be? The GP who replies that “we don’t have all the answers” but “I’ve heard some good things about chiropractic” [translation: anecdotes]? Or would you prefer to be a similarly kind, sympathetic and friendly doctor keyed in with and competent to analyse the current evidence base of chiropractic, who provides a careful and evaluated response? The second doctor does not have all the answers but can inform their patient of the lack of demonstrable benefit in trials⁶ and the known association of cervical manipulative therapy with vertebral artery dissection and stroke,⁷ perhaps saving their patient money, disappointment and averting a further, if small, risk to health.

The answer is simple, though achieving it is not. It requires doctors who are skilled, and who have been tutored and trained in the art of critically assessing the evidence-base of modern medicine. Medical students who intercalate their clinical studies with a research degree or who find themselves on a traditional pre-clinical course may be introduced to the analysis of scientific papers early. However, most of our medical graduates nowadays fall into neither of these two categories, and subsequently lack the analytical skills that good clinical practice demands. The gap can be remedied both by hard work, and by fostering the art of scepticism.

To return to the question of whether scepticism helps you to pass exams: Studies appear to suggest that re-examining your first choice of answer in those questions where you are uncertain, and changing your answer upon reflection, can lead to fewer wrong answers and an improved score. This logically suggests that *developing a questioning attitude increases the chance of passing those exams*. Scepticism should thus be injected into our initial question responses, in the hope (and evidence-based prediction) that more answer changing will result in improved exam performance. In addition, students are advised to become familiar with their examination formats as, the evidence is clear, success in MCQ and EMQ examinations requires a combination of knowledge and technique.

The passing of exams, and the scepticism that will help you achieve this, is not where medicine ends, but where it begins. From the day you start your first clinical rotation as a qualified doctor, the responsibility of patients’ health and wellbeing is in your hands. It is now you must ask yourself whether you want the care you provide to be based on solid evidence signifying proven safety and efficacy, or on unjustifiable claims and personal reports? If you answered the question correctly, it’s time to become sceptical!

Ashley I. Simpson, Academic Foundation Trainee
Queen’s Medical Centre, Nottingham University Hospitals Trust
and

Susan Bewley, Consultant Obstetrician
Guy’s and St. Thomas’ NHS Foundation Trust, London

...please see page 7, opposite, for references

FREE TUBE OF 'SWEETIES', ANYONE?

THE OTHER week I went to my local Boots chemist to get my regular 3 for 2 B vitamins. After I made my purchase I was told that there was a promotion: if one spent more than a certain amount of money on supplements one received a free tube of Boots effervescent 'Energy Boost', supplement.

Being a registered dietitian I duly checked what was in these effervescent tablets before I accepted them. They contained a wide array of B vitamins, at around the recommended intake level, and also vitamin C and guarana. The vitamin supplement I had bought already contained very similar vitamins, again at the recommended intake level; so taking these would give me twice my recommended intake level of several vitamins. So I politely refused my freebie, pointing out that I would be doubling up on some vitamins, which I did not think was a good idea.

Frankly I was surprised at Boots doing this. Now, I doubt any harm would come to me taking high levels of mostly water soluble vitamins but there were a number of issues here which I felt went against a registered dietitian's principles:

1. Dietitians believe that vitamins and minerals should be treated with respect; not consumed like sweets, but taken only if it is felt that there is a need, and preferably on the advice of a registered health practitioner. There are some exceptions, like the public health policy of advising all women of child bearing age to take a 400 microgram supplement of folic acid, and the elderly to take a vitamin D supplement.
2. Dietitians advise that supplements should not be taken at levels above the recommended intake (or, to be technical, the Dietary Reference Value or DRV). At doses higher than this, there is increasing evidence that vitamins and minerals may harm, especially if taken regularly at high doses. Vitamins that can cause harm at high doses include vitamin A and vitamin B6, and there's evidence that vitamin C and folic acid may not be that innocuous either. Smokers are advised not to take beta carotene supplements as they may increase their chances of getting lung cancer! There are exceptions to this, for example, folic acid should be taken at higher levels pre-pregnancy to help reduce the level of babies born with neural tube defects. But even in this case, the government is hesitant in the UK of introducing mandatory food fortification with folic acid (a B vitamin) because too high a level taken for a period of time could be increasing the incidence of colon cancer.
3. Dietitians take pride in their minimum 4 year training and to be registered we have to continually prove competence and keep ourselves up to date. In this way we are different from nutrition-

al therapists as they do not have such a thorough physiological and biochemical grounding. And indeed they often 'treat', members of the public by advising they take all sorts of supplements. Only dietitians can actually give therapeutic dietary advice to patients on the NHS.

4. Dietitians continually strive to promote messages of responsibility regarding supplement use and, fortunately, EU and other authorities are passing legislation to tighten up on how they are promoted and sold. For example, except for some vitamins such as folic acid, retail outlets should not sell high dose supplements, i.e., doses above the DRV. Now when I was given the free sample I was not asked if I was already on any similar supplement or whether I might be pregnant. Some consumers might not realise that guarana is a source of caffeine and so has the same side effects, such as possibly leading to insomnia and nervousness. On researching this ingredient I came across a lot of warnings with respect to children, pregnant and lactating women, and those with high blood pressure.

Well, my dietetic 'principles' drove me to give Boots' customer services a call to ask why this promotion was happening, and whether it was in all Boots' stores. The customer service guy said that he didn't think it was an issue, but would talk to his supplement team at Boots HQ. He also pointed out that basically I was one lone customer with no authority backing. He was not sure it was a national scheme, but he would check.

A few days later a customer service adviser called me back, with much the same response. He had been assured by his supplement team that as vitamins were not like regulated medicines, so Boots were doing nothing wrong. The reason for doing it was to get customers to try the product and see if they liked it. I asked him what was the criteria of 'liking it'; the product was not a food, so surely customers would not be going for taste, and would just ten tablets really give them a burst of vim and vigour? Again I was told I was just a small voice and that was that!

At least I have been allowed an outlet through HealthWatch for my frustration!

Gaynor Bussell

Freelance Dietitian, London and Pembrokeshire

BOOTS' RESPONSE

HealthWatch raised Gaynor's concerns with Boots' media relations department and they gave us the following statement, "Boots UK is committed to providing products that we know our customers want to buy and are supported with the help and advice from our healthcare professionals. All our Boots branded Vitamins, Minerals and Supplements are within the Safe Upper Level as set by the UK Government's own advisory body and are clearly labelled with safety warnings. In the case of Boots Re-Energise Boost, the label states, 'If you are pregnant, breastfeeding, diabetic or currently taking any medication please consult your doctor or pharmacist before taking this product.' Under food law we are permitted to advertise and promote food supplement products." Issued by Boots UK Spokesperson, 2nd December 2010.

References to "Does scepticism help you pass med school exams?"

...from page 6, opposite

1. Bauer D, Kopp V, Fischer MR. Answer changing in multiple choice assessment change that answer when in doubt—and spread the word! *BMC Medical Education* 2007; **7**: 28.
2. Fischer MR, Herrmann S, Kopp V. Answering multiple-choice questions in high-stakes medical examinations. *Medical Education* 2005; **39(9)**: 890–4.
3. Harden RM, Brown R, Biran LA, Ross WP, Wakeford RE. Multiple-choice questions: to guess or not to guess. *Medical Education* 1976; **10**: 27–32.
4. Fleming PR. The profitability of 'guessing' in multiple-choice question papers. *Medical Education* 1988; **22**: 509–13.
5. Hammond EJ, McIndoe AK, Sansome AJ, Spargo PM. Multiple-choice examinations: adopting an evidence-based approach to exam technique. *Anaesthesia* 1998; **53**: 1105–8.
6. Ernst E. Chiropractic: A Critical Evaluation. *Journal of Pain and Symptom Management* 2008; **35(5)**: 544–562.
7. Miley ML, Wellik KE, Wingerchuk DM, Demaerschalk BM. Does cervical manipulative therapy cause vertebral artery dissection and stroke? *Neurologist* 2008; **14(1)**: 66–73.

book review

A BALANCED STUDY GUIDE ON ALTERNATIVE MEDICINE



Alternative Medicine (Vol. 195 Issues Series), edited by Lisa Firth.
Published by Independence Educational Publishers, Cambridge, 15 September 2010.
£7.45 paperback, 48 pages. ISBN-10: 1861685602 ISBN-13: 978-1861685605

SOME TIME ago we were approached by Lisa Firth of Independence Educational Publishers for permission to reprint Nick Ross' article, "WHO cares about the dangers of homeopathy?" from the October 2009 issue of the *HealthWatch Newsletter* in *Issues Series*, a series of resources for GCSE, A-Level and FE colleges about social issues. The publisher's strapline (at <http://independence.co.uk>, where you can see the complete list of their publications) is "Committed to provoking debate on today's social issues". We were happy to give permission to spread the word of HealthWatch still further.

Nick's article is included in this overall well balanced volume on alternative, complementary and traditional medicine, which starts by defining the terms and discussing why people use CAM. There are articles of one to two pages in length reprinted from Arthritis Research UK, Patient UK, Cancer Research UK, YouGov, WHO, the European Herbal and Traditional Medicine Practitioners Association, the *Telegraph* and The King's Fund. These are all balanced and thoughtful articles to set the scene.

This introduction is followed by a chapter on, "The Debate", starting with a balanced, if somewhat critical, *Daily Telegraph* review of the book *Trick or Treatment* by Edzard Ernst and Simon Singh. This is followed by a report on the British Medical Association's vote against homeopathy funding, with a rebuttal from the British Homeopathic Association on the facing page, and two pages from the BHA giving their view of homeopathy on the NHS. Perhaps unfortunately the half of the second page is the results of a survey by the Medicines and Healthcare products Regulatory Authority (MHRA) on public perceptions of herbal medicine—something very different from homeopathy. Similarly, a two page report on the House of Commons Science and Technology Committee that

said homeopathy should no longer be available on the NHS includes more results from the MHRA survey on public perceptions of herbal medicine. This is followed by a page from the British Homeopathic Association called "Homeopathy works and is an important part of the NHS" and a plea for integrated healthcare from a Conservative MP which suggests, *inter alia*, that Evan Harris (Liberal Democrat) lost his seat at the last election because of his critical views on homeopathy and integrated healthcare. Then there are two pages from the NHS Knowledge Service summarising the lack of evidence for efficacy of homeopathy and defending its continued provision on the NHS as a matter of patient choice. This is countered by a report from *The Independent* and an article by Edzard Ernst, a discussion of the placebo effect from the Wellcome Trust, and Nick Ross' article, followed by another rebuttal from the BHA.

There is then a report, "Herbal medicine is under threat" about the forthcoming EU regulation of practitioners of herbal medicine from *The Guardian*, an IPSOS Mori poll showing strong public support for regulation of herbal medicines, a piece by Ben Goldacre and advice from the MHRA on safe use of herbal medicines.

It would be interesting to see this little book in use in a school to provoke debate. Perhaps only the keen-eyed students would see that the only defence of homeopathy comes from the BHA, but I would hope most, if not all, would be swayed by the sound information from so many authoritative bodies. I think this will be a valuable resource for teachers, and should help to foster HealthWatch's ideals among students.

David A Bender
Emeritus Professor of Nutritional Biochemistry
University College London

Published by HealthWatch

Press enquiries to Professor John Garrow: 01923 710665
www.healthwatch-uk.org

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3. Better understanding by the public and the media that valid clinical trials are the best way of ensuring protection.

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