Teaching teenagers about clinical trials, p 764

Lockerbie: we should be proud of Al-Megrahi's doctors

PERSONAL VIEW **Jim Swire**

In December 1988 a Boeing 747 was destroyed by a bomb in a baggage container in its hold at 9500 m over Lockerbie, 38 minutes after leaving Heathrow, where it had been loaded from empty. The criminal investigation was placed in the hands of the United Kingdom's smallest police force, Dumfries and Galloway.

By May 2000 the investigation, following the lead of a random selection of clothing found at the crash site and originating in Malta, believed that the bomb had also entered the aviation chain there, aboard an Air Malta flight, placed by Abdelbaset Al-Megrahi, a Libyan. A trial began at Zeist, near Utrecht.

Despite Air Malta's denials of being the initial carrier, reinforced by substantial payments to them from a UK television company that had repeated that story on air, and despite the lack of any evidence in court as to how Al-Megrahi was supposed to have breached security at Luqa airport in Malta, he was found guilty. Then on the failure of his first appeal in Zeist in 2002 he was transferred to a Scottish prison.

Only during that first appeal was it revealed that, unlike at Luqa, where there was no evidence of any failure of security, the perimeter at Heathrow had been broken through the night before Lockerbie, close to where the container, in which the bomb exploded, was loaded. No effort had been made to discover the intruder or their motivation, despite the immediate logging of the "incident" by Heathrow staff.

Some people urged that analgesics should be withheld from the suffering prisoner; one wrote to me that he hoped Al-Megrahi's death would be a long drawn out agony

There was no jury in the appeal; amazingly the verdict still stood. The official United Nations observer, Hans Kochler of Vienna; the Scottish law professor Robert Black of Edinburgh; and many others, including me (I attended at Zeist throughout) doubt that the verdict should have been reached. In Scotland, too, public opinion is deeply divided.

In view of these and other remarkable weaknesses in the trial it was little surprise when the Scottish Criminal Case Review Commission decided in 2007, after four years' delay, that the whole thing may have been a miscarriage of justice and referred the case back for a second appeal.

ABDEL MAGID AL FERGANY/AP/PA

Al-Megrahi: the prisoner's release provoked fury

By August 2009 Al-Megrahi, now aged 57, was gravely ill and in pain. It was widely known that he had metastatic prostate cancer, with substantial skeletal secondaries. Under a precedent in Scottish law that terminally ill patients could be granted "compassionate release" if they were believed to have only a few months to live, Al-Megrahi—who still proclaimed his innocence—was released to his home in Tripoli by Kenny MacAskill, the Scottish justice secretary.

There were shouts of fury from those who had not looked at the evidence for themselves. Some of these were the same voices who had urged that analgesics should be withheld from the suffering prisoner; one wrote to me that he hoped Al-Megrahi's death would be a long drawn out agony.

MacAskill had taken the advice of the prison medical service in Greenock prison, which in turn had called in two Scottish consultants; and he was also advised by a prominent professor of oncology. This oncologist was apparently accompanied by two other, English, doctors. I understand that all doctors involved conferred before advising MacAskill that a likely prognosis for Al-Megrahi was about three months.

But two major changes have taken place since then. Firstly, Al-Megrahi has been returned to his own country and is with his own loving family. We know that a major reduction in stress will sometimes induce a major remission, even in a terrible progressive illness such as his.

Secondly, he has undergone a course of treatment in Tripoli with one of the taxol series of drugs, together with palliative radiotherapy. These can be associated with remissions of many months. Presumably they had not been given in Scotland, for some reason.

Now that he has survived for seven months, allegations are appearing in the media that this man's illness was fabricated or at least exaggerated for some political or economic motive and that the doctors must have been "bought."

My own medical knowledge of the case is confined to meeting Al-Megrahi in prison and observing his physical decline and is without any professional involvement, except for discussion with the oncologist. Nevertheless I wish to support the advice that my distinguished medical colleagues gave to MacAskill. *BMJ* readers will be able to confirm that the two major changes in Al-Megrahi's circumstances might well explain the dramatic and welcome improvement in his condition.

In any case, "How long have I got, doc?" was never a question to which I knew a precise answer as a GP; seldom are a doctor's humanity and tact more tested.

The prognosis delivered by our doctors in this fraught case helped to precipitate a major crisis in the UK-US alliance, in which President Barack Obama and Hillary Clinton were both to express their great displeasure. But by sticking to their patient oriented professional duty, the doctors contributed to a major relief for a dying man. We should be proud of them.

When I last met this quiet and dignified Muslim in his Greenock cell he had prepared a Christmas card for me. On it he had written, "To Doctor Swire and family, please pray for me and my family." It is a treasured possession by which I shall always remember him. Even out of such death and destruction comes a message of hope and reconciliation for Easter.

Jim Swire is a retired GP (and father of Flora, a Lockerbie victim)

Cite this as: *BMJ* 2010;340:c1725

REVIEW OF THE WEEK

The appliance of science

Dramatising the issues concerning clinical trials can switch a new generation on to their benefits, finds **Beth Hibbert**

Starfish By Judith Johnson, produced by the Y Touring theatre company for students aged 14+

www.ytouring.org.uk/productions/Starfish/index.html

Rating: ★★★★

I had no idea what to expect when I arrived at a side room of the Royal Albert Hall last Sunday. I was seeing a production by the Y Touring theatre company, a group set up by Central YMCA in 1989 to explore the often difficult issues in the areas of health, sex education, and the ethics of science in an interesting and interactive way. Being a massive fan of drama myself, but not quite bursting with enthusiasm for science, I was dubious about how the two subjects could join together and, well, work.

Y Touring have several plays touring UK schools at the moment. I saw *Starfish*, by Judith Johnson, which sets out to explore the issues surrounding clinical trials. I knew nothing about clinical trials when I arrived, and judging by the questions and responses during the discussion after the performance neither did most of the other teenagers in the audience, which suggests that Johnson has hit on a good idea for a play.

The story is narrated by Adrian, who tells us about his son Michael, a design and technology teacher who contracts bovine spongiform encephalopathy (BSE). Desperate for a cure, Adrian discovers a potential treatment on the internet but cannot get hold of it because it hasn't been put through clinical trials. Alongside this storyline runs another about Shannon, one of Michael's students, who has social phobia. Shannon is given the opportunity to participate in two clinical trials: one for a confidence boosting nasal spray, which she refuses; and one to compare virtual counselling with cognitive behaviour therapy, which she accepts.

I knew absolutely nothing about clinical trials before seeing *Starfish* and now I would definitely consider taking part in one

Starfish was fascinating; there wasn't a moment when I wasn't intrigued. The quality of acting from all four characters was superb. Most outstanding was Max Saunders-Singer, who played Michael. Lester Firkins, whose son has BSE and on whom the character of Adrian was based, told me after the play how highly convincing the performances were.

An educational play is a good way to get teenagers interested in the ethics of research. Taking my GCSEs this year, I'm sure the knowledge I've gained from watching *Starfish* will come in use, and my friend felt the same way about her A level course. The only improvement would have been to see an example of a complete, successful clinical trial—we only heard about people's involvement in ongoing trials and saw no outcome, and I'm not sure the outlook was positive.

After the performance came a live debate, which involved seriously cool, interactive, handheld remote control devices. We used the handsets to answer questions and vote on the outcome of a court case that was based on a clinical trial—deciding whether 19 year old Holly's father should be allowed to give her the same drug that Adrian could not give Michael in the play. It was interesting to see everyone's responses displayed on the giant MacBook on stage. The friendly host, Steve, made sure that adults and children from the audience felt confident enough to contribute to the discussion.

At school we learn about science in such a vague way that it is hard to imagine how what we are taught can be applied to the world of work. Looking at how drugs are tested in clinical trials and how they may become the subject of court cases allowed me to glimpse a few of the ways in which science is used in everyday life, not just in medicine but in research and law. I could almost understand why some people might want to make a career out of it.

Firkins wants people to see the play so that if they are ever offered the chance to take part in a clinical trial they will know enough about them to make an informed decision. I knew absolutely nothing about clinical trials before seeing *Starfish*, and now I would definitely consider taking part in one. I believe that testing potential treatments is a good thing, as long as the risk of harm is low. It could lead to lifesaving treatment being made available to people like Michael.

Starfish made me think about issues that would never normally cross my mind. It was entertaining and captivating in a way that made it hard to believe it was educational too.

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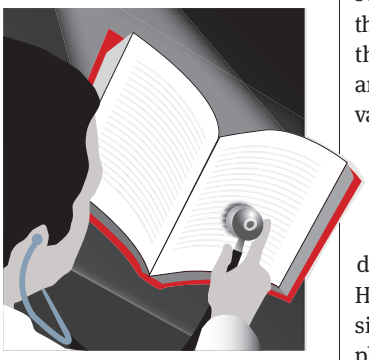
Cite this as: *BMJ* 2010;340:c1713

An author spurned

BETWEEN THE LINES
Theodore Dalrymple



"What is the object of the Society but to advance Natural Knowledge? And how can it expect to do this if it tries to stifle or ignore that which is adverse to generally accepted beliefs?"

Almost everyone who has written for publication has received letters of rejection; and I think it a fair surmise that almost everyone reacts, at least in the first instance, by supposing that the fault lies not with what they have written but with the blindness and folly of the publisher.

This was certainly the reaction of H Charlton Bastian (1837-1915)—emeritus professor of the principles and practice of medicine at University College London and physician to the National Hospital in Queen Square—to the refusal of the Royal Society (of which he was a fellow) to publish his researches into the spontaneous generation of bacteria.

In the foreword to his book *The Origin of Life: Being an Account of Experiments with Certain Superheated Saline Solutions in Hermetically Sealed Vessels*, published in 1911, he writes with all the anger of the prophet (or crank) unheard and the author spurned: "What is the object of the Society but to advance Natural Knowledge? And how can it expect to do this if it tries to stifle or ignore that which is adverse to generally accepted beliefs?"

Bastian was a distinguished neurologist whose researches and publications on aphasia are regarded as classics in their field. (He was also an erudite naturalist, discovering 100 new species of nematode worm.) But his real life's work, in his own opinion, was his research into the origins of life itself. He was an early believer in the theory of evolution, but he pointed out that, logically speaking, life must have had an origin; and he went on to conclude that there was no reason why, if it had originated once, it should not have continued to originate. In defiance of Pasteur and other luminaries he set out to demonstrate that this was so.

He resigned from his chair at University College in 1898 to pursue his private researches. He put a mixture of distilled water, sodium silicate, ammonium phosphate, phosphoric acid, and pernitrate of iron in glass flasks, sealed them, heated them to 130°C, exposed them to the sunlight, and opened them after varying lengths of time, whereupon he found that torulae, bacilli, cocci and penicillium-like moulds had developed in the flask. He hypothesised that silicon had taken the place of carbon in these organisms.

His findings were not accepted, to say the least. He also held other eccentric views, such as heterogenesis: the belief that bacteria do not always reproduce themselves but sometimes emerge as amoebae, ciliated protozoa, and so on. He also believed that bacteria might originate in the cells of multicellular organisms, a view that gave comfort to those who argued that germs did not cause disease: rather, disease caused germs.

His books, finding no favour elsewhere, were published by Watts and Co, which founded the Rationalist Press Association and published titles such as *Humanity's Gain from Unbelief* by Charles Bradlaugh (the first militantly atheist member of parliament, who would stride on to the stage at public meetings, take out his pocket watch, and challenge God to strike him dead within a minute).

Bastian as good as accused the Royal Society of hypocrisy. He quoted against it the statement at the beginning of the volumes of its *Transactions*: "The grounds of [the Society's] choice are, and will continue to be, the importance and singularity of the subjects, or the advantageous manner of treating them, without pretending to answer for the certainty of the facts, or propriety of the reasoning, which must still rest on the judgment of the respective authors."

Odium theologicum (theological hatred) is by no means confined to theologians.

Theodore Dalrymple is a writer and retired doctor

Cite this as: *BMJ* 2010;340:c1759

MEDICAL CLASSICS

A Companion to Manuals of Practical Anatomy E B Jamieson

First published 1913

For almost 200 years the anatomy dissection room was a rite of passage for any young person studying medicine. Scottish graduates, especially those from the Edinburgh Medical School, dispersed the teaching of anatomy throughout the English speaking world. In the middle years of the 20th century the writings and teachings of E B Jamieson dominated.

Known affectionately as "Jimmy," he wrote the *Illustrations of Regional Anatomy* and the accompanying compact book *A Companion to Manuals of Practical Anatomy*. They were the inseparable companion of any preclinical medical student and were known respectively as "Jimmy's plates" and "Wee Jimmy." These two books, together with dissection of the body, were for generations of students to form part of a triad of learning, in the anatomy room, at home or in lodgings, and in the library. His expertise was recognised by his being invited to be a member of the small committees that in 1917 and 1927 revised the Basle Nomina Anatomica.

The books first appeared in 1913, and the large initial sales sustained them to reach a seventh edition in 1950. He described the bones, muscles, fasciae, vascular system, lymphatics, and neurology before progressing to the major organs. The text was terse and unambiguous; the logic he developed became the basis of subsequent clinical thought. His lectures were the same each year, following the text of his books, so much so that one student was able to use his mother's lecture notes.

E B Jamieson (1876-1956) was born in Shetland. After graduating at Edinburgh Medical School he became a demonstrator in the department of anatomy under William Turner. There he remained, as senior lecturer, for nearly 45 years. He did little or no research. His interest was almost entirely in the teaching of regional anatomy.

Jamieson (front, third from right) and Edinburgh colleagues, 1900-1

WELLCOME IMAGES

As a warm and caring teacher his influence on Edinburgh medical students was profound. He would sit in his den at the head of the dissecting room and from time to time sally forth to quiz hapless youths on their dissection. Each year one or two students were invited back to Shetland to help him manage the croft and to fish and salt herring for the family's winter food. Female students were not included in his teaching routine. There were many stories abut him and his eccentricities.

The Edinburgh University Student Magazine in the 1920s said of him: "Watch him pass with step majestic / Down cadaver littered room / On his face one sees depicted / All this sad world's sorry gloom / Listen now, his voice majestic / Tells of nerve in hidden nook / Then unerring draws it forward / With his special little hook / Dear old Jimmy, kindest creature / Large of heart, of friends the best / Very many student troubles / Lurk within that massive breast."

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Cite this as: *BMJ* 2010;340:c1702

Politics of conflict

FROM THE FRONTLINE
Des Spence

Professional politicians are a particular breed—pretending to listen, never actually answering a direct question, revelling in their opponents' pain, and changing with their stance to match public opinion. They are fundamentally opportunistic, being the first to criticise others, especially in the public sector. So when pilloried in the parliamentary expenses scandal for employing their children and spouses; enriching themselves through property; and claiming for the petty to the preposterous, they found little sympathy from doctors. Now politicians are in the dock over lobbying—acting as paid mouthpieces for corporations or unions. The indignant honest majority of MPs now bail for complete transparency.

In 2004 there was a move towards transparency in medicine, with Scottish government policy to establish a register of doctors' "interests," specifically around hospitality and payments, that would be open to public scrutiny (*BMJ* 2004;328:69). But no doctor that I know has been asked to declare interests, and despite pained phone calls to some hospitals in Scotland I could find no register of interests. My conclusion is that this policy was simply never implemented. This is a shame. Hospitality, meals, trips, and international quasieducational conference with accommodation—junkets—are still being provided to NHS doctors and paid for by drug companies. But worse still, undisclosed wads of cash are changing hands between the industry and doctors as fees for lectures and consultancy. This relationship is just lobbying by a different name. The size of payments is hard to quantify, but the deafening silence is testimony to the potential problem.

Occasionally conflicts are disclosed at the end of journal articles, but these are merest whiffs, with no sense of the scale or amounts paid. Many leading international, national, and local experts (especially in profitable chronic diseases) are clearly addled by potential conflicts of interest. And these matter because despite all the science of medicine, ultimately medicine is merely a distillation of opinions. Paid experts' opinion directly affects public policy, patient care, and the uptake of new drugs. We should not forget Vioxx, a scandal that shames us all. So knowing conflicts of interests is not enough: we need to know exactly how much our bow-tied-betters have received, in cash and in kind, so that we might make a judgment on the validity of their "opinions." The General Medical Council, long cowed by negative public opinion, has a chance to take a lead because we earnest backbenchers of medicine would welcome a properly enforced national register of the conflicts of interest of all doctors. Our professional integrity is in collective ownership—it is not for sale.

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Cite this as: *BMJ* 2010;340:c1780

Old dogs and new tricks

DRUG TALES AND OTHER STORIES
Ike Iheanacho

Among the obvious privileges of medical training is the exposure it affords to information and ideas that would otherwise be difficult to corral under a single heading. Inevitably this knowledge is patchy and disjointed, and too much of it has to be crammed—more to satisfy examiners than to aid patients. But these downsides are greatly outweighed by the genuinely fascinating aspects.

It would, for example, require a peculiarly closed mind not to be intrigued by the concept of learnt helplessness, a staple feature of any decent psychology course for medical students. This phenomenon is well illustrated by the cruel experiments that first revealed it. Dogs subjected repeatedly to electric shocks that couldn't be predicted or avoided eventually made no attempt to evade these aversive stimuli even when, later, the means to do so were clearly available. The thinking goes that they learnt to behave helplessly, having perceived that they could exert no control over the circumstances relating to the noxious outcome.

Democratic politicians, though they probably wouldn't admit it, would love to engender learnt helplessness among their electorates. For sure, they can't (yet) use population-wide electric shock treatment to such an end. But skilled deployment of threats of future unpleasantness is a practical alternative.

Take the UK today. With the economy in intensive care and a general election just weeks away, you're never far from the next discussion about balancing the national budget through drastic cuts in spending, tax rises, or both. The need for such remedies is unquestionable—it is simply the clear eyes of common sense meeting the stony face of reality.

But many politicians of all stripes seem to want us to go far beyond this acknowledgment. They seek not just to emphasise that the situation is dire but also to suggest catastrophe should voters be foolish enough not to opt for their prescribed tough (but mysteriously undefined) solutions. The resulting general air of gloom, pierced by intermittently alarming noises, can only encourage the susceptible to tolerate—meekly, passively, and without question—whatever is proposed.

Such moves towards mass learnt helplessness would be disastrous, through diluting scrutiny and challenge of specific plans to slash spending (on things like health, education, or defence) that are ill conceived and geared more to short termist imperatives of the electoral cycle than the country's welfare.

If this prospect is worrying, then another lesson from man's best friend offers some consolation. A sizeable minority of the animals in the original experiments did not develop learnt helplessness: old dogs don't necessarily fall for new tricks.

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Cite this as: *BMJ* 2010;340:c1730