

Editor's comment

Sacred cows



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Regular deworming of children in the developing world is a simple, inexpensive way to improve not only the health of children, but to improve their brain power and increase their educational and employment prospects – yes? Actually, no – if you look at the evidence. But the idea is so deeply entrenched in the minds of doctors, scientists and funders alike that the number of international organisations that support deworming as a development initiative and not simply as a health measure is huge. And because so many people support the idea everyone just continues to assume that deworming really does all it is believed to do. But the evidence is at best equivocal. A recent Cochrane review on the subject, published in July 2012 by a team from the Liverpool School of Tropic Medicine, shows 'quite strongly' that 'deworming alone has no effect on growth, cognitive ability, or school attendance'.

Deworming was not the only sacred cow to be debunked last year. The first was regular screening mammography for breast cancer. The literature on this subject has been gradually building up over a number of years, but it was last year that a couple of pretty definitive studies concluded that regular screening mammography not only does not prevent deaths from breast cancer, but it results in unnecessary treatment (with all its attendant side-effects) in a significant number of women. So far I have seen nothing about this in the lay press or from the medical aids or cancer NGOs.

Then there is the flu vaccine. We are all encouraged to have the vaccine, to encourage our patients to have it and it is

automatically provided in old-age homes around the country. The NHS in the UK provides it specifically for the elderly, those with respiratory illness and various other 'at-risk' categories. I admit that I have had a flu vaccine every year for some years now. But there is no evidence that the vaccine does in fact protect the very categories that are presumed to be 'at risk'. I will wait for further studies before making up my mind because the idea of herd immunity is compelling – but it may be that the strains simply mutate too fast for effective immunity from a single vaccine. The point is that this is yet another common medical intervention that is not based on any real evidence.

Then there are the annual health checks that are so beloved of the UK NHS (for the over 70s) and of various medical schemes in this country. Again – absolutely no evidence that these make any difference at all to morbidity and mortality – whatever the age of the recipient. In fact the evidence coming out of UK studies is that all these checks do is make a perfectly well population think that they are sick, as the natural ageing process is medicalised and called disease. Anecdotally, I suspect that the same happens to people in other age categories who obediently go for their annual check – one of my running partners (in her 50s) was told by her GP that her cholesterol level was on the 'upper range of normal' and that she should go on a statin. Her GP has obviously never heard of confidence intervals.

The final insult to scientific intelligence is the imminent introduction of dementia screening for all adults over 50 in the UK NHS system, by government decree. A letter to the *British Medical Journal* by a large number of GPs and specialists pointed out that this was at best not useful and at worst dangerous to the mental wellbeing of their patients. Not only is there no evidence that mass screening for dementia will have any benefit, but at present we have no effective intervention if signs of dementia are picked up (in spite of what the pharmaceutical companies would have us believe) and no way of preventing onset or progression. This particular screening intervention is an excellent example of just how easy it is to introduce an intervention into a population without any evidence of its efficacy – simply promote it as something that will be good for people and few will question.

To go back to the deworming story – last year's Cochrane report is not the first time that the Liverpool team has doubted the efficacy of deworming as a development measure. The first version of the review was co-published in the *British Medical Journal* in 1997 and the second in 2000 – both to a chorus of criticism. Professor Paul Garner, a senior author says: 'Nobody likes evidence that disconfirms their beliefs. The first thing they do is to rubbish the methods and then they rubbish the person.'

Science is all about re-examining ideas in the light of new evidence. Medical science should be no different.