

ESSAY REVIEW

Fake Medical News

Doctoring Data: How To Sort Out Medical Advice from Medical Nonsense by Malcolm Kendrick. Layerthorpe, York, UK: Columbus Publishing/YPS, 2015. 296 pp. \$16.99 (paperback), \$8.99 (Kindle). ISBN 978-1907797460.

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Fake medical news can kill. Unfortunately, much of the medical news disseminated everywhere is indeed fake in the sense of not trustworthy, perhaps most dangerously in what is generally accepted as sound medical practice. Much of the peer-reviewed mainstream medical literature is not to be trusted, as pointed out by John Ioannidis among many others.¹

This book explains how to improve health and extend lifespan by exercising informed skepticism. The author, Malcolm Kendrick, M.D. (University of Aberdeen, 1981), practices in Cheshire (England). He had earlier published *The Great Cholesterol Con* (John Blake Publishing, 2008), and he posts regularly at <https://drmalcolmkendrick.org>.

When someone is obviously ill, or damaged physically through accident or warfare or other physical violence, modern-day medical practice can be splendidly effective. On the other hand, modern-day medical practice can be dangerously harmful for symptom-free people whose numbers on any of a variety of tests happen to deviate appreciably from a population average. So-called preventive medicine, almost exclusively based on prescription drugs, has a very high risk-to-benefit ratio, not least because the purported benefits have rarely—if ever—been demonstrated in actual practice.

Doctoring Data has 10 chapters described as “tools for establishing the truth”:

1. Association does not mean causation
2. Lives cannot be saved; we are all going to die
3. Relative mountains are made out of absolute molehills
4. Things that are not true are often held to be true
5. Reducing numbers does not equal reducing risk
6. Challenges to the status quo are crushed—and how

7. Games are played and the players are . . .
8. Doctors can seriously damage your health
9. Never believe that something is impossible
10. "Facts" can be, and often are, plucked from thin air

Each chapter elaborates appropriately on its title, with true stories that drive the lessons home. Some of these instances would be unbelievable, were they not fully documented. I marked as worth quoting so many points that I can only urge that everyone read this book, often enough to absorb its lessons well enough to apply them whenever it is suggested that one take some prescription drug to ward off possible future harm. Difficult and onerous as it may be to seek out the pertinent specific information for oneself, there is simply no possible substitute, no available shortcut. There exist no authoritative sources that can be relied on safely for every topic. In my own experience, only after much reading on each topic could I identify trustworthy sources and individuals on specific issues: HIV/AIDS, global warming, Loch Ness Monsters; but those are three distinct categories, and those who are reliable about HIV/AIDS are not necessarily reliable about global warming or about Nessies.

To illustrate further the need for personal effort: I had read a great deal about claims that HIV does not cause AIDS, yet after about a decade I was still not sure one way or the other. Then a particular assertion stimulated a lengthy search of the literature that forced me to recognize that the results of HIV tests demonstrate unequivocally that what is being measured is not an infectious pathogen. My analysis (Bauer 2007) is available in documented detail for anyone to examine, but I doubt that it can carry the same conviction as it did for me as I was uncovering the primary data for myself and recognizing patterns.

That need for personal effort is the central lesson of Kendrick's book. Most people would surely find it unbelievable a priori that contemporary official statements about preventive medicine could be so ungrounded in evidence as they in fact are, and that the literature of medical research is so full of unsound material as it is. Only through personally encountering a sufficient number of examples does this become believable. It helps, too, to recognize the drastic increase in recent decades in sheer dishonesty, in science including medical science (p. 24 ff., see also Bauer 2017:Chapter 1).

Preventive medicine is aimed by definition at people who are not aware of any troubling symptoms. It is based currently on presumptions as to what are a healthy (or "normal") blood pressure, a healthy body-mass index, and healthy levels of blood sugar and cholesterol. This practice of prescribing drugs based on numbers and not on tangible symptoms began less than a

century ago (Greene 2007). This practice is irrational in presuming that the same numbers are normal or healthy for everyone irrespective of all the characteristics in which human beings vary. Furthermore, it has never been demonstrated that such regulation of numbers brings the purported benefits (e.g., Järvinen et al. 2011). Despite that, there is a continuing initiative—whose ultimate impetus comes from the pharmaceutical industry—to modify guidelines steadily in the direction of medicating ever more people. Thus “high” cholesterol meant >7.5 mmol/l (UK; in USA, 290mg/dL) in 1981, reduced steadily over the years to the current “optimum” of 4.4 mmol/l (170 mg/dL); yet some 85% of adults in the Western world have a higher level than that (pp. 7–8, 148). Moreover, the average cholesterol level of French people is slightly above the European average, yet theirs is the lowest rate of heart disease in Europe (pp. 84–85). The “Swiss . . . have the highest average cholesterol level in Europe . . . 250 mg/dl But . . . they have the second lowest rate of heart disease in Europe.”²

Similarly irrational are the guidelines relating to blood pressure, which ignore the long-established fact that blood pressure increases normally with age (Bauer 2012a).

Chapter 1 of *Doctoring Data* describes how current medical science routinely transgresses the basic fact that statistical association does not demonstrate causation.

Simple example: Yellow fingers are associated with, but do not cause, a higher risk of lung cancer: Smoking brings about both.

More intricate examples: Consumption of red meat was found to be *associated* with increased risk of death, particularly from cardiovascular disease and cancer, superficially supporting the standard “red meat increases cholesterol and cholesterol is bad” story. Yet the data also showed that consuming red meat was associated with *lower* levels of blood cholesterol. The missing, crucial, variables were that eating lots of red meat was also associated with more smoking, less exercise, higher intake of calories, and incidence of diabetes. Eating red meat may be entirely harmless if one does not smoke, is not obese, and is moderately active physically (p. 27 ff.). Again, a statistical association had brought the recommendation of hormone replacement therapy for women after menopause, said to reduce the risk of heart attacks—until, many years later, a proper clinical trial revealed the very opposite (pp. 31–32).

Chapter 2 exposes as hype and spin any claim that something “saves lives.” When data actually showed only that people at high risk of heart attacks and strokes lived on average 3 months longer when treated with statins, multiplying by population size led to a press release asserting that if 10 million people were put on statins, “about 50,000 lives a year—that’s

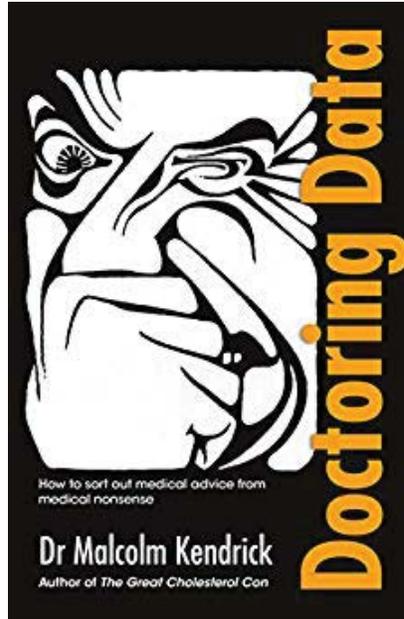
a thousand a week” would be saved (pp. 34–37).

Another type of number-inflating ruse is the subject of Chapter 3: reporting *relative* rather than *absolute* risk, a widespread ploy for misleading over the benefits of drugs. Say a certain medication decreased mortality by 50% in a one-year clinical trial: Obviously, everyone should take it. But if the trial had enrolled 20,000 people, 10,000 taking the drug and 10,000 not; and among the latter, two people died, among the former only one; 50% reduction, as stated. But the individual risk of death has been reduced only from 2 in 10,000 to 1 in 10,000—and the drug’s side effects might well carry a mortality risk far

outweighing that benefit. *Relative risk reduction should never be accepted as grounds for taking a medication.* What doctors and patients should attend to is NNT: the Number of people Needed to be Treated for one of them to benefit. Yet even here there are pitfalls: If the intended benefit includes a large enough number of possible outcomes—avoiding not only death but also mere hospitalization, minor non-disabling stroke, angioplasty, bypass surgery—then the NNT can be made to seem much lower than is meaningful from a patient’s point of view (pp. 46–48). Here Kendrick fails to make the important point that NNT should best be compared with NNH, which measures the harm done by a treatment’s side effects—NNH = Number of people Needed to be Harmed before one of them succumbs.³ However, that lacuna in Kendrick’s presentation is of little or no practical importance at present since NNTs and NNHs are almost never reported.

Citing decreased mortality achieved by some treatment for, say, cancer, is misleading in much the same way as reporting relative rather than absolute results. *Overall* mortality is the critical variable. After all, death *from cancer* could be reduced to zero if the treatment for it—surgery or chemotherapy or radiation therapy—caused 100% mortality (p. 48 ff.).

In this connection Kendrick cites one of his genuinely shocking exposés of how the medical literature misleads through selective reporting. A trial of statins resulted in significantly lowered all-cause mortality; but an



examination of the data revealed that the benefit applied only to men—more women using the statin died than among the women on placebo; “in no statin study done has there been an [favorable] impact on overall mortality in women” (pp. 51–52; also p. 71).

Chapter 3 continues by pointing to ways in which standard statistics (frequentist, null-hypothesis, p -value) can mislead and do so routinely: “There are hundreds of different ways of choosing how to present data to make them seem to say certain things” without actually lying (p. 53). Such tactics are described in some of my favorite books: Huff (1954), Best (2001, 2004).

Chapter 4 deals generally with how and why some ideas not based on sound evidence become quickly and widely accepted while others, based on solid evidence, are pooh-poohed; there are many delectable quotes about this from a variety of authors. Illustrations include cholesterol-cardiovascular-disease theory, hormone-replacement therapy, and such dietary fads as wine/resveratrol and chocolate = good/bad.

Chapter 5 cites the copious data showing that reducing numbers does not reduce risk. The mistaken belief that it does stems from the reliance on surrogate endpoints or biomarkers: blood pressure and cholesterol level as though they measured a state or level of cardiovascular disease, blood sugar as though it measured a state of diabetes. Beyond that, blame also rests on “the linear model,” the assumption that potential harm is linearly proportional to dosage, that risks to blatantly ill individuals are also present in proportionately milder form for everyone. In other words, that it may be beneficial to lower the blood pressure of individuals who suffer such tangible symptoms as extreme headaches means that it will also be beneficial to prescribe blood-pressure-lowering drugs when the pressure is only a bit above the population norm. That is an implausible assumption in the first place; further, the evidence against it includes the well-established phenomenon of hormesis (Calabrese 2004), whereby low doses of some poisonous substances, and also of radiation, actually improve health—plausibly, by stimulating the immune system into activity.

How far can a patient rely on expert opinion? In a study of how treatment impacted the quality of life, the doctors were sure that it improved, whereas relatives of the patients were sure of the very opposite; the patients’ opinions were in the middle. A rather striking illustration of seeing what one hopes to see.

Chapter 6 is about the sad circumstances of people who swim against the tide, about which there is a copious literature (Bauer 2012b, 2017, and sources cited there). Experts by definition are those who propound the mainstream view; and peer review also serves to entrench what is generally

accepted and to dismiss and denigrate dissenters. When results go against the accepted view, researchers quite typically engage in semantic euphemism to hide the fact, by presenting the results as only *seeming* or *appearing* to contradict accepted doctrine.

Chapter 7 describes some of the deceptions that have become so common because research is almost exclusively funded by the pharmaceutical industry. Should anyone doubt whether the deceptions are deliberate, consider what the drug companies themselves say, for example, “effectively manage the dissemination of these data in order to minimize any potential negative commercial impact.” That was advice from SmithKline Beecham to Glaxo Wellcome before they merged into the present-day Glaxo-SmithKline, in connection with their promotion for children of an antidepressant, paroxetine, despite the associated risk of suicides (p. 155). The subsequent fine that GSK paid, *three billion dollars*, represented only one-quarter of what sales of paroxetine had brought in over the years (p. 156).

As to how authoritative guidelines are generated, consider the National Cholesterol Education Program (NCEP) in the National Heart, Lung, and Blood Institute of the National Institutes of Health. The listed financial ties of Committee members to drug companies cover more than a page of the book’s text (pp. 160–161). The Committee recommended “Aggressive LDL lowering for high risk patients [primary prevention] with lifestyle changes and statins”; whereas the independent Cochrane Collaboration, reviewing almost the same set of studies, advised that “Statins have not been shown to provide an overall health benefit in primary prevention trials” (p. 162).

Big Pharma also creates and supports “public-interest” groups, “consumer advocacy” groups, and “charities” whose aim in truth is to promote drug sales. Thus HEART UK is Britain’s “cholesterol charity” whose “vision” is “To prevent avoidable and early deaths caused by high cholesterol” (p. 172); the charity’s supporters include such drug companies as AstraZeneca, Bayer Schering, Boehringer-Ingelheim, Bristol Myers Squibb, Merck, among others (p. 173).

Peer review does not keep things honest. Deceptive clinical trials are reported deceptively, as attested by Richard Smith (2005), long-time editor at the *British Medical Journal*, in “Medical journals are an extension of the marketing arm of pharmaceutical companies”; a view seconded by Richard Horton, editor of *The Lancet*, and by Marcia Angell and Jerome Kassirer, former editors at the *New England Journal of Medicine*. There are innumerable ways in which the results of clinical trials can be assured to support a desired outcome, and all of them are used routinely. Thus only a publicly funded trial found that statins provide no benefit at all (p. 145).

Chapter 7 concludes by urging potential consumers of prescription

drugs to be skeptical and to seek out contrarian claims and voices before accepting the standard mainstream view. In Chapter 8, Kendrick reverses a common saying to urge, “Don’t just do something, stand there” (p. 184). The stage is set by recalling some things that were accepted medical practices at one time but are now regarded as absurd and harmful, say, blowing tobacco smoke into the rectum (p. 183) or prescribing strict bed rest, which may have killed millions of people from 1912 into the mid-1960s (p. 187); just as AZT killed some unknown number of people after misleading clinical trials during the initial hysteria over AIDS (p. 189 ff.).

It is a dilemma for doctors: They wish to help people, and that makes it extremely difficult to admit that any standard medical practices might ever have been harmful rather than beneficial, though the evidence is clear enough that it has happened quite often.

In this connection, Kendrick believes that cardiac bypass surgery and angioplasty are performed far too often. I suppose he means when patients are not experiencing tangible symptoms. I personally benefitted from angioplasty after having fainted; and from a quintuple cardiac bypass 10 years later after being almost unable to breathe. What may be appropriate in extreme cases may also be unnecessary and inappropriate in the absence of tangible suffering.

On average, too many people take too many drugs. Especially with older people, health can often be dramatically improved simply by stopping many of their medications (p. 200 ff.). On the other hand, some forms of dementia may be associated with malnutrition: B vitamins might even help stave off Alzheimer’s (p. 211, citing Douaud et al. [2013]).

“Never believe that something is impossible” is the tantalizing title of Chapter 9. Kendrick would replace the category of impossible by three choices: probable, possible, or unlikely (p. 213). He believes that harmful consequences of mitochondrial dysfunction⁴ might include Chronic Fatigue Syndrome (CFS), Myalgic Encephalomyelitis (ME), and Autism Spectrum Disorder (ASD). One study indeed found “measurable mitochondrial dysfunction which correlates with the severity of illness” in people complaining of ME/CFS (p. 230). One of the co-authors of that study became so much non grata to Britain’s National Health Service (p. 231) that she went into private practice.⁵

Nor does Kendrick discount the possibility that vaccination might indeed lead to autism. He cites a specific case in which vaccines were officially acknowledged to have significantly aggravated an underlying mitochondrial disorder, causing damage with features of ASD; the vaccine didn’t, however, *cause* autism, it was said, but merely “resulted” in it (p. 223). Kendrick had published a number of times in a British journal for

general practitioners, but when he wrote a piece criticizing how Andrew Wakefield has been demonized, the journal simply would not publish it (p. 227).

Among things long labeled impossible or quack by medical establishments but that work: Pulsed electromagnetic energy is used to heal bone, and it may also work against depression and against migraines (p. 235).

Chapter 10 illustrates how “facts can be and often are, plucked from thin air”; for instance, the common dietary advice to consume five portions of fruit and vegetables daily was made up at a meeting of fruit and vegetable companies in 1991 in California (p. 243). So too with the cutoff values for body mass index where above 25 means overweight and above 30 means obese; Kendrick points out that such exact round numbers should always arouse suspicion (p. 245). Another shocking example is cited of how data on cholesterol and mortality were fudged to point to the very opposite of what they mean (p. 249).

Everyone should read this book.

Notes

- ¹ See periodically updated bibliography *What's Wrong With Medicine* at <http://henryhbauer.homestead.com/WhatIsWrongWithMedicine.pdf> or <https://mega.nz/#!oOAhVaxA!BwxcAEUqYP4V5eDDwtPnWGwoJv kUpp5NVaPPDOakNHs>
- ² What Is Your ‘Statin by Date’? <https://drmalcolmkendrick.org/2013/11/19/what-is-your-statin-by-date/>
- ³ How (Not) To Measure the Efficacy of Drugs. <https://scimedскеptic.wordpress.com/2015/02/19/how-not-to-measure-the-efficacy-of-drugs>
- ⁴ Mitochondrial dysfunction has been suggested as the basic underlying cause of aging: “Bioenergetic therapy for aging: Mitochondria hold the key to cellular life and death.” *Life Extension Magazine*, Cover Story, February 2001; citing A. W. Linnane, *Lancet*, 1(1989):642–645; *Biochimica et Biophysica Acta*, 1271(1995):191–194; *Annals of the New York Academy of Science*, 854(1998):202–213.
- ⁵ Sarah Myhill. About My Practice: A Private Medical Practitioner—To Be or Not To Be? http://www.drmyhill.co.uk/wiki/About_my_practice

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References Cited

- Bauer, H. H. (2007). *The Origin, Persistence, and Failings of HIV/AIDS Theory*. Jefferson, NC: McFarland.
- Bauer, H. H. (2012a). Seeking immortality? Challenging the drug-based medical paradigm. *Journal of Scientific Exploration*, 26:867–80.
- Bauer, H. H. (2012b). *Dogmatism in Science and Medicine: How Dominant Theories Monopolize Research and Stifle the Search for Truth*. Jefferson, NC: McFarland.
- Bauer, H. H. (2017). *Science Is Not What You Think: How It Has Changed, Why We Can't Trust It, How It Can Be Fixed*. Jefferson, NC: McFarland.
- Best, J. (2001). *Damned Lies and Statistics: Untangling Numbers from the Media, Politicians, and Activists*. Berkeley, CA: University of California Press.
- Best, J. (2004). *More Damned Lies and Statistics: How Numbers Confuse Public Issues*. Berkeley, CA: University of California Press.
- Calabrese, E. J. (2004). Hormesis: A revolution in toxicology, risk assessment, and medicine. *EMBO Reports*, 5(Supplement 1):S37–S40. DOI:10.1038/sj.embor.7400222
- Douaud G., Refsum H., de Jager, C. A., Jacoby, R., Nichols, T. E., Smith, S. M., & Smith, A. D. (2013). Preventing Alzheimer's disease-related gray matter atrophy by B-vitamin treatment. *Proceedings of the National Academy of Sciences USA*, 110(23):9523–9528.
- Greene, J. (2007). *Prescribing by Numbers: Drugs and the Definition of Disease*. Baltimore: Johns Hopkins University Press.
- Huff, D. (1954). *How to Lie with Statistics*. New York: W. W. Norton.
- Järvinen, T. L., Sievänen, H., Kannus, P., Jokihara, J., & Khan, K. M. (2011). The true cost of pharmacological disease prevention. *British Medical Journal*, 342. DOI:10.1136/bmj.d2175
- Smith, R. (2005). Medical journals are an extension of the marketing arm of pharmaceutical companies. *PLOS Medicine*, 2(5):e138. DOI:10.1371/journal.pmed.0020138