

Infodoc 07 | [PDF](#)

'Statistics'

"There are three kinds of lies: lies, damned lies, and statistics." - Mark Twain , Autobiography (this remark has also been attributed to Disraeli, amongst others)

It has been demonstrated how the pro-fluoride lobby has managed to overcome a number of hurdles in their attempt to dispose of toxic fluoride wastes via public water supplies. They infiltrated and influenced Government, and consolidated. This was followed by using their influence within powerful circles to create a public health 'need' for fluoridated water.

The next stage was to 'produce' statistics based on badly designed studies to underpin their claim that drinking fluoridated water is effective in reducing tooth decay. Much has already been said, and written, about the earliest fluoridation trials and schemes. Despite being trumpeted as 'successes' by the pro-fluoride lobby, such schemes have often come in for severe criticism due to their bad design and assumptive conclusions.

Consider the following letter written by Hubert A Arnold, PhD. and sent to Dr. Newbrun in 1980;-

University of California, Davis

Department of Mathematics

Davis, California, 95616

May 28, 1980

Dr. Ernest Newbrun

Medical Sciences Bldg. 653

San Francisco, CA 94132

Dear Dr. Newbrun:

Thank you for your telephone inquiry about my course on statistical frauds, and "The Statistical Frauds Group". It was given in The Experimental College at this campus for a number of years.

In the course of time, "The Statistical Frauds Group" arose from it.

The course and the Group have been dormant for a couple of years, but after my retirement in July 1980, I may revive them. There does seem to be some demand.

We investigated all manner of questionable statements and activities, some qualitative, but most of them quantitative. We conducted interviews and collected published matter, and analyzed all these, using standard statistical procedures.

In addition to deliberate frauds, errors in judgement or method were examined. Often it was difficult to detect if there was a deliberate fraud. We looked over statements by manufacturers or purveyors of consumer goods. But a very copious source was papers in medical research journals. Particularly good examples of blatant statistical misconduct were found in the Public Health Service reports.

The announced opinions and published papers favoring mechanical fluoridation of public drinking water are especially rich in fallacies, improper design, invalid use of statistical methods, omissions of contrary data, and just plain muddleheadedness and hebetude. Many of the blunders were so glaring that I gave them to my beginning freshman classes in statistics at the very first meeting.

The students see through them straightway, and are afforded great amusement. Uproarious laughter frequently ensues. No special statistical equipment is necessary to detect those peccancies. Of course the class and the Group soon tired of those infantilities, and sought and found greater challenge.

By the way, a study by John Yiamouyiannis and Dean Burke on possible connection between cancer and waterborne fluoride was fairly tightly reasoned. The statistical procedures were standard, and much better applied than in much of the Public Health work.

As I pointed out in a letter published in the proceedings of a congressional committee investigating the above connection, the real point is that direct chemical and controlled experimental research by unbiased uncommitted agencies is urgently indicated. Clearly fluoridation should be discontinued everywhere until definitive results on safety are obtained.

In this connection, a great source of entertainment to the Group was the ferocity with which the researchers attacked any criticism. Invariably they violated in their own work the very principles they insisted on in others' work.

The Group found that corrections for age, race, etc. were applied in a most perfunctory and indiscriminate manner, without regard to whether they appertained to the given situation. The Group found over and over that new, unbiased, research was almost impossible to instigate.

The old "Frauds Group" should be revived and reorganized. If funds are forthcoming, I may consider the undertaking. Every campus should have an invulnerable group that punches holes in stuffed shirts and lets the air out.

If I may help further, please let me know.

Sincerely, (Signed) Hubert A. Arnold, Ph.D.

This letter quite literally 'hits the nail on the head'. However, the poor design and manipulation of early fluoridation trials is not amusing considering the way they have been employed to deceive and defraud the public at large.

Another letter which condemns the presentation of dental health data comes from a statistician: Professor J N R Jeffers of Cumbria.

In early 1997, Professor Jeffers received a letter asking for his opinion of 'dental health league tables'. These 'league tables' are produced annually for various age groups and gives the number of decayed, missing and filled teeth, plus the fluoridation status, for each district health authority in the UK. They are normally published by the Government-sponsored pro-fluoridation propaganda machine, the British Fluoridation Society.

Professor Jeffers highlighted the inadequacies of such league tables;-

PROFESSOR J N R JEFFERS

Glenside, Oxenholme

Kendal, Cumbria LA9 7RF

19th February 1997

Dear (Name withheld)

Thank you for the two small items that you faxed me the other day.

I was Interested in the league tables for 5-year and 14-year old children that you sent me a few weeks ago, principally because they are excellent examples of how not to present information - unless you are determined to distort that presentation in favour of a particular argument. I often use data sets of this kind as case studies for my students, and you may be interested to see the case study that I have prepared for these particular data.

As you will see, the way in which districts were chosen for fluoridation does not allow of any rational judgement about the effects - beneficial or otherwise - of the effects of fluoridation. There are too many other factors which are confounded with the allocation of districts to treated and untreated groups. The league tables would have you believe otherwise.

Yours sincerely , (Signed) John Jeffers

These two letters demonstrate how the pro-fluoride lobby cannot find any good statistical evidence to prove that water fluoridation is effective.

Another reason why league tables are used is to dupe lay people into thinking that water fluoridation works. The only thing that such league tables prove is that they are totally unreliable and misleading. They serve no other purpose.

Perhaps if there was a modicum of intelligence, self-respect, integrity or honesty in the pro-fluoridation movement, then poor quality statistics would never see the light of day.

But the salient lesson is that league tables do impress the uninitiated. at least the British Dental Association (BDA) appears to think so based on their very poor and inaccurate 'parliamentary constituency league table' published in August 2003.

The information contained within that table was so poor it beggars belief that an allegedly professional organisation like the BDA would want to put their name to it - but they did! So desperate are the pro-fluoride lobby to promote their cause that they would risk everything on such a shoddy piece of work.

But it is not the design of the league table which has duped so many of our politicians, it is the credentials of the BDA which has won support from our very gullible MPs.

The ultimate lesson to be learned is that established bodies like the BDA can print what they like, regardless of the quality of their work, and yet still be given the benefit of the doubt.

Reputation is everything, and the truth suffers as a consequence.

The final word goes to Dr Colquhoun (as quoted by Sir Ivan Lawrence in the House of Commons in 1985), a retired Chief Dental Officer for Auckland, New Zealand, who discovered that his previously held views that fluoridation was effective were not accurate...

I found on my study tour that new better designed research was under way, which I reported to the health department on my return and which I, along with other believers in fluoridation, hoped would finally prove the superiority of fluoridation over other methods of prevention. But the results of this research, though often presented in guarded and ambiguous ways, have not supported the case for fluoridation at all. They show that dental decay rates have dropped dramatically in most developed countries whether they practice fluoridation or not, and in fluoridated countries it dropped in unfluoridated places as well. Also, the European countries which discontinued fluoridation some years ago, there are no reports of an increase in dental decay as a result.

And ...

Statistics from the Greater Auckland region, that is three health districts containing over a quarter of New Zealand's population, show:

[1] where an unfluoridated area is compared with a fluoridated area of similar income level, the percentage of children who are free of decay is consistently higher in the unfluoridated area.

[2] As well as the above, decayed, missing and filled teeth scores show, when socio-economic differences are allowed, child dental health is better in the unfluoridated area.

And AMEN to all of that!