

*The file drawer effect and how to fix it: Why medical journal editors think it's time for action*

*Arthur Schafer*

North Americans consume a lot of pills: pills for high blood pressure, low libido, high cholesterol, acid reflux, arthritic pain, depression.

We take prodigious quantities of these and other pills, and spend a fortune of money in the process, because our doctors have been persuaded and have, in turn, persuaded us, that these pills work.

Doctors get their information about what works and what doesn't from a variety of sources – including what they were taught twenty years ago at medical school and what they were told last night by a paid consultant of some drug company after a fancy free dinner. Doctors are very busy people, of course, but they are nevertheless expected to base their treatment recommendations upon the best scientific evidence available in the leading medical journals. In theory, at least, we live in the era of “evidence-based medicine”.

Unfortunately, when your doctor consults the medical journals she will likely discover only a thin slice of the relevant evidence, namely, the slice that makes new (and fiercely expensive) drugs look good. Those clinical trials which show the new drugs to be no more effective than older cheaper drugs are seldom submitted to the journals; hence, they remain unpublished and inaccessible to your doctor. The same is true for evidence which shows that a new drug has unacceptable side-effects.

Here's an illustrative example. Let's say that twenty studies have been done of a new class of drug intended to control high blood pressure. Now, suppose that of those twenty studies, six are positive (favourable to the new drug) and fourteen are negative (showing that the drugs have dangerous side effects or work less well than older drugs).

One might naively think that this would be the end of the story. The new class of drugs would be consigned to the scrap heap of medical research, and the hunt would continue for a better, more effective treatment.

Suppose, however, that as a direct or indirect result of drug company influence, twelve of the negative studies are not published, while *every* positive study is published. Physicians who then attempt conscientiously to review the literature would find six positive but only two negative studies.

Since four out of six *published* studies seem to demonstrate that the new drug works well, drug company reps then spread the good word (along with quantities of free

samples) to the medical community. The new drug is hailed as a medical break-through and rapidly becomes part of standard therapy.

This phenomenon of suppressing negative results is known formally as “publication bias”. More colloquially, it’s known as “the file drawer effect”, because negative studies are hidden away in a company’s file drawer.

If the much-touted movement towards “evidence-based medicine” is to mean anything, then physicians need unbiased data on the clinical effectiveness, toxicity, convenience and cost of new drugs compared with available alternatives. However, because of the phenomenon of publication bias, what passes for good scientific evidence is deceptively incomplete.

The pharmaceutical industry claims that when they sponsor drug trials the resulting data become their commercial property, to publish or to suppress as they see fit. Critics argue that it’s vital for patients to know the bad as well as the good news about new drugs in order to make proper health decisions.

Happily, rescue from this alarming situation is at hand.

The International Committee of Medical Journal Editors (ICMJE) has just announced that in future it will refuse to publish the results of any clinical trial if that trial was not recorded at its outset in a publicly-accessible registry. The editors hope to compel drug companies to disclose all the data from the trials they sponsor. Publication bias would thus be eliminated.

For many years, health advocates have been warning that the current state of medical research isn’t proper science so much as marketing through censorship or self-censorship. What seems finally to have spurred the ICMJE into action was a law suit, brought by New York State Attorney General, Elliot Spitzer, against the British pharmaceutical company GlaxoSmithKline.

The company was successfully marketing its anti-depressant Paxil for use by children and young people, even though the evidence from some of the clinical trials – which it refused to make public – indicated both that Paxil was no more effective than placebo AND that Paxil increased the suicidal tendencies of depressed children.

GlaxoSmithKline has not admitted wrongdoing, but it has agreed to pay a multi-million dollar settlement. It has also agreed, as have some other drug companies, that it will in future post more complete trial results on its website.

The ICMJE, however, is not impressed by the companies’ death-bed repentance. As one editor asks: “Why would you put the fox in charge of the hen house?” Perhaps it’s time for governments, including the American government, to compel the companies, by law, to register all their results online in a not-for-profit database.

The public should take heart from these developments. If we could eliminate or drastically reduce publication bias, doctors and patients would finally gain access to much vital information presently hidden away in locked company filing cabinets. The next important step would be to tackle the pervasive bias which comes from having so many of our leading hospitals, universities and researchers heavily beholden to the sponsorship of the pharmaceutical industry. When your grandmother told you that “he who pays the piper calls the tune” she knew whereof she spoke. If we want public science in the public interest we may have to be willing to pay for it with public funds, as we used to do twenty or so years ago, before the trend towards “partnerships” with industry took hold.

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