Research funded by the industry

Bailey and colleagues[1] write in this issue of the journal about industry influence on evidence-based surgery. This is a topic that is popular in both the lay and medical media. The discussion is not going to go away. Universities are encouraging industry relationships to help finance academic efforts. Government granting agencies are asking for definitive ties to the corporate world to identify knowledge transfer possibilities that will help get products to market; some grants are based solely on the linkage of commercialization and research. Corporate ties with research are only going to get stronger. This will be a potential problem that we have to monitor. Bhandari and colleagues[2] from McMaster University have identified that the odds ratio of a proindustry conclusion in a surgical trial was 5 times greater than that in an industry-sponsored drug trial. I performed a quick search engine verification of Bailey and colleagues' results. Searching the phrase "medicine industry bias" returns 30 million results in Google. The scientific or medical body of researchers may be lax with analysis of this relationship, as the same search terms only returned 322 results in the PubMed database. Bailey and colleagues actually identified only 190 studies that dealt particularly with bias in surgical studies.

Certainly, industry-driven studies have the potential to be biased for many reasons. The design of the studies is heavily warped in favour of a positive result. I have sat on panels that review industry-driven grants and have been able to compare them to researcher-derived grants. With few exceptions, the industry-based grants are poor examples of evidence-based research. In general, industry-based studies are interested in results from a few select surgeons performing a simple procedure or using a device that often is not compared with the gold standard. This is frequently explained as being impossible to perform: for example, autologous bone grafting is too expensive or painful to compare with the new wonder drug. The results are not transferable to the general population, the surgeon users or current surgical practice. But because of their randomized or prospective nature, limited industry-derived studies are considered to have a high level of evidence. We need to be careful with such designations. For example, the bone morphogenetic protein market increased from nothing to an $800-million-a-year niche in less than a decade. This increase occurred on the back of 2 highly quoted human studies that, on further review, may not reflect the data that were initially published. Further research by other groups has never obtained the same results despite hundreds of projects being conducted on the same topic.

We need to be vigilant in our interpretation of the literature. Industry-supported research is necessary, otherwise we will have very little funding in the near future. But we need to retain control of more parameters of research and have neutral review panels. The literature should reflect the bias inherent in studies. Finally, journals need to have more information about the design and funding of the studies and report that information to the readers so that the general population can decide for themselves what is meaningful research.

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Competing interests: None declared.

References

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DOI: 10.1503/cjs.023811