# INTRODUCTION
# Dangerous Liaisons? Industry Relations with Health Professionals

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Relations between industry and physicians have a checkered history. As recently as the 1950s and 1960s, contacts between pharmaceutical company representatives and physicians were seen in a strongly positive light; representatives were viewed as important sources of information for physicians.[1] That light has dimmed considerably in recent decades. By the mid 1980s, such contacts were rated as decidedly unimportant sources of information for physicians,[2] and since the turn of this century, frank condemnation has become prominent in both the medical literature and lay press.

To our knowledge, the level of interest in relations between industry and health care professionals, as reflected in the medical literature, has not been studied, so we have generated a quantitative depiction of the number of such commentaries. We searched PubMed, limiting the search to core clinical journals in the English language, using the search term, "conflict of interest industry." (See Figure.) The data include all listed publications, including editorials and correspondence.

One article on the subject was identified in 1975, then none at all until a single paper was published in 1987. Thereafter, the number of articles per year grew slowly, remaining in the range of 10-15 through the 1990s. In 2000, the number suddenly increased to the range of 35 to 70 articles per year; this plateau has been sustained through 2008. The search identified 540 articles, more than half (309) of which were in four major English-language journals: the *Journal of the American Medical Association* (97), the *British Medical Journal* (82), the *New England Journal of Medicine* (73), and *The Lancet* (57). Most of the articles criticized interactions between industry and health care professionals in the three major areas where conflicts of interest might arise: biomedical research, health care education, and clinical care of patients.

No single cause of the abrupt rise of interest in conflicts of interest in 2000 is apparent. The American Medical Association recognized a problem in the provision of gifts to physicians by pharmaceutical representatives in 1990, when it adopted a policy that spelled out in detail how physicians should respond to offers of gifts from industrial representatives.[3] This event had little impact on the number of publications concerning conflicts of interest in industry-physician relations. By the late 1990s, a cluster of widely reported controversies gained academic attention. It might be instructive to examine briefly a few of those controversies.

Concerns about the relationship between industry and medical research were raised by a highly publicized controversy at the University of Toronto in 1998-1999. Dr. Nancy F. Olivieri reported the results of a clinical trial of a drug for treating thalassemia major, sponsored by a Canadian drug firm, Apotex.[4] Dr. Olivieri's concern that the drug could harm patients led her and her co-workers to publish the study over the objections of the company. The controversy gained international attention.[5] The company alleged that the contract Olivieri signed required that her research

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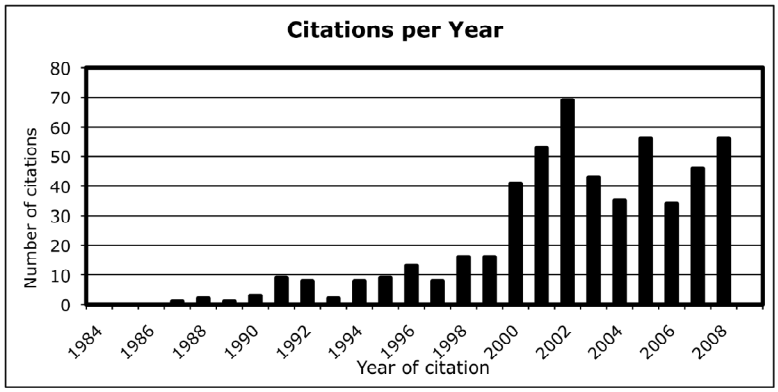
Figure

**Health Care Professionals' Conflicts of Interest Related to Industry: Number of Citations Per Year in PubMed**




results be kept confidential. The controversy was resolved in 1999.[6]

At around the same time, questions were raised about the objectivity of physician investigators who were assessing the safety of drugs in clinical use. In 1998, a high-profile debate developed over the safety of calcium channel antagonists when a study showed that clinicians and researchers who wrote about these drugs frequently had financial ties to the drugs' manufacturers.[7] The authors recommended that investigators reporting studies of pharmaceutical products should completely disclose relationships with the manufacturers of those products.

A paper published in 2000 presented evidence that industry often controlled trial design, data analysis, and publication.[8] Industry control was manifested in several ways: decisions on funding clinical studies was made by marketing departments based on expected impact on sales; companies designed studies to produce desired results; data were stored by the company, and investigators worked only with data selected by the company; reports were ghost written by company personnel while listing investigators as authors; and companies delayed or prevented publication of results unfavorable to a product. A strongly worded editorial accompanied this study; it answered positively the title question, "Is Academic Medicine for Sale?"[9]

As controversy regarding the relations among industry, biomedical investigators, and research journals expanded, focus was renewed on the effects of gifts from pharmaceutical companies to individual physicians. A broad investigation of over 500 previously published studies found that physician interactions with drug representatives were frequent and were associated with requests for additions to the hospital formulary and changes in physicians' prescribing practices.[10] Continuing medical education programs sponsored by drug companies as well as presentations by representatives were associated with increased prescribing of the particular companies' products. This study added to the growing interest in the negative effects of industry contacts with health care professionals.

The events cited above and the concerns they engendered exemplify the cluster of issues that led to the growth spurt of publications on conflicts of interest at and after the turn of the millennium, as shown in the Figure. Concerns about the ill effects of industry influence on patient care, clinical investigation, and health care professional education continue today, expressed in journal articles at a rate in the range of 35 to 70 a year.

Commentary on academic-industry relations has not been entirely pejorative, however. An examination of the facts underlying the published critiques of those relations found that the grounds for criticism were weak or entirely absent and that many of the consequent conclusions and recommendations were unjustified. The overall picture showed growing impediments to progress and a "trend toward increasing regulation and the triumph of emotion over fact."[11] Looking to the future, the author suggested, "The intense energy currently dedicated to demonizing academic-industrial research relationships should be redirected toward developing better ways to identify and facilitate the type of partnerships that have brought more good, by far, then harm."

Continuing widespread interest in relations between industry and health care professionals gave rise to the conference that generated this symposium, held in Charleston, South Carolina, in September 2007: "Dangerous Liaisons? Industry Relations with Health Professionals." The conference addressed problems in the areas of regulation of biomedical research, gifts from industry to health care professionals, direct-to-consumer advertising, and industry support for medical education.

Paul H. Rubin starts this special issue with an essay ("Altruism and Self Interest in Medical Decision Making") arguing that self-interested behavior is better than altruism as a basis for benefiting patients and improving health. He uses industry promotional activities directed at both physicians and patients as examples, and provides evolutionary explanations for the widely held but false belief in the motivational

efficacy of altruism. Peter Lurie ("DTC Advertising Harms Patients and Should Be Tightly Regulated") finds little to recommend direct-to-consumer advertising, contrary to Rubin's assertions. He believes such advertising is nothing more than an attempt to recruit patients as agents of drug companies.

Matthew Wynia and David Boren ("Better Regulation of Industry-Sponsored Clinical Trials is Long Overdue") find that much contemporary regulation of clinical trials for testing new drugs is actually misregulation; the need is not for more but for better regulation. Sigrid Fry-Revere and David Bjorn Malmstrom ("More Regulation of Industry-Supported Biomedical Research: Are We Asking the Right Questions?") find that the arguments advanced to justify regulation of clinical trials are weak at best, and nearly all suffer from fallacious reasoning. They suggest that new regulations should be based on sound evidence and logical reasoning.

Lance K. Stell ("Drug Reps Off Campus! Promoting Moral Purity by Suppressing Commercial Speech") analyzes and criticizes a broadly influential recent paper on conflicts of interest, which proposed draconian limitations on interactions between industry representatives and health care professionals.[12] The proper approach, he argues, lies not in scattershot prohibitions and limitations on drug companies; rather, it lies in educating residents and students to recognize and defend against biased sales techniques, forcing representatives to provide truly educational materials. Howard Brody's essay ("Pharmaceutical Industry Financial Support for Medical Education: Benefit, or Undue Influence?") sees industry support for continuing medical education as highly biased and aimed at marketing pharmaceutical products. These efforts have been successful, in that industry anticipates gaining $3.56 in increased sales for every $1.00 it puts into CME.

We hope you find that these contributions shed light on some dark corners of widely discussed controversies.

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