

Aren't doctors smart enough and ethical enough to not be influenced by a slice of pizza?

Doctors are intelligent people who care about their patients. As a result, most of us don't believe that we will be influenced by marketing. Yet the gifts, food, personal relationships, and biased data presentations work very well—on an unconscious level. This is a consistent finding in the medical and social sciences literature (for a concise review, see Dana & Loewenstein 2003).

It is also important to consider that the pharmaceutical industry spends \$30 to \$60 billion on marketing every year—this is nearly twice the amount that these companies spend on drug research and development (Donohue, Cevalco, & Rosenthal 2007; Gagnon & Lexchin 2008). Pharmaceutical companies know exactly what their money is buying, and the returns on their marketing expenditures are good. Most of that marketing is directed at doctors. Between the one-on-one visits with physicians, freebies, marketing samples, and industry-funded meetings, these companies annually spend \$35,000 to \$61,000 per doctor in the US (Donohue, Cevalco, & Rosenthal 2007; Gagnon & Lexchin 2008).

If we constrain pharmaceutical companies' ability to market their expensive, new drugs, then won't that hurt innovation? R&D is expensive.

Truly innovative and valuable drugs don't require expensive marketing campaigns; the evidence speaks for itself. It is the "me-too" drugs, or the new drugs without clear therapeutic advantages, that require the aggressive campaigns to change prescribing. These drugs are nearly identical to those already on the market—just more expensive due to patent protection. Of the 3,122 drugs reviewed by the journal *Prescrire* over the last 25 years, only 2% were found to provide an important therapeutic innovation, while over 90% did not appear to offer any real benefit over already-available drugs (*Prescrire International* 2005). In addition, marketing often drives rapid uptake of new drugs based on supposed therapeutic superiority; in the course of time, a much less positive risk-benefit picture often emerges (recent examples include Vioxx, Avandia and Vytarin, as well as atypical antipsychotics, newer antidepressants and drugs for Alzheimer's disease).

Can't some of these policies go too far? If we completely ban industry interaction, aren't we throwing the baby out with the bathwater?

Industry certainly relies on advice from physicians to improve their products, and medicine relies on industry to bring treatment innovations to market. Medical schools and professional societies have taken this into account when designing strong policies on conflict-of-interest. These policies allow mutually-beneficial relationships to flourish while limiting the aggressive marketing that biases medical decisions and can hurt patients.

More specifically:

Doesn't the industry need input from academic physicians to develop better products?

Yes, and consulting relationships are perfectly acceptable. However, in each case, the work should be detailed in a contract and overseen in such a way as to ensure that payment is commensurate to the task.

Don't drug representatives provide important education on how to use a drug? Why cut off this source of information?

Pharmaceutical representatives are employed to increase the sales of the drugs they promote. They are salespeople, paid from the companies' marketing budgets. The companies often have access to each physician's individual prescribing record, so they can reward their representatives based on how much they increase sales (Prescription Project "Fact sheet on Prescription Data Mining" 2007).

Pharmaceutical representatives present doctors with research and other information that is carefully chosen to demonstrate the benefits of the drugs that they are marketing, not to be representative of the literature on those drugs (Berman & Ahari 2007; Ziegler, Lew, & Singer 1995).

Sales representatives are a biased source of information at best; often they are a source of misinformation. Sales representatives typically do not have a science background, let alone one in pharmacology. Rather, it is charisma that is valued in their hiring and in their training. Some companies even have found it effective to recruit their sales force from cheerleading squads (Saul 2005). As a result, it is not surprising that one study found that 11% of the statements in a series of pharmaceutical company presentations were blatantly inaccurate; all of these misstatements were favorable toward the promoted drug. None of the statements about competitors' drugs were favorable (Ziegler et al. 1995).

Ultimately, doctors should not be relying on advertisements when making prescribing decisions. The published, peer-reviewed medical evidence is summarized for physicians by several organizations that do not have conflicts of interest. Such sources include, for example: The Cochrane Library, Drug and Therapeutics Bulletin, Drug Effectiveness Review Project (the findings of which are further summarized for patients by Consumer Reports Best Buy Drugs), First Consult, The Medical Letter, National Institute for Health and Clinical Excellence (United Kingdom), Prescrire International, and Therapeutics Initiative.

Drug samples can be helpful in getting a patient started on a new medication quickly, especially if the patient's insurance doesn't cover it, so isn't it harmful to do away with samples?

Drug samples are a very effective marketing tool. Samples often lead to physicians prescribing expensive, new drugs in place of cheaper drugs that are at least as effective and have better-established safety records (Adair & Holmgren 2005; Boltri, Gordon, & Vogel 2002; Chew et al. 2000; Miller et al. 2008; Morgan et al. 2006; Ubel, Jepson, & Asch 2003).

Of course, this is the intention behind providing free samples. Pharmaceutical representatives often actively discourage physicians from giving samples to patients who can't afford the drug. Rather, samples are meant to give patients a taste of a drug in the hopes that they will feel the need to fill a prescription and pay for it when the sample is done. This is why the cost of samples comes out of companies marketing budgets.

And the strategy works. Lower-income patients are less likely to receive free samples than those with incomes greater than 400% of federal poverty level; and those who are uninsured for all or part of the year are less likely to receive samples than continuously-insured patients (Cutrona et al. 2008). A recent, nationally-representative, longitudinal study confirmed that when patients receive free samples, their out-of-pocket prescription costs increase by nearly 50% on average, going from \$166 to \$244 per 6-month period (Alexander et al. 2008).

Several academic medical centers have successfully stopped accepting samples with only narrow exceptions (e.g., free clinics). These schools include, for example, Mt. Sinai, University of Pennsylvania, Columbia, and the entire University of California system. Other schools have implemented policies that mitigate the use of samples as a marketing tool and improve safety by directing samples to be collected, logged, and distributed by the central pharmacy, removing the intermediary sales representative and ensuring proper labeling and use. In addition to this, the University of Pittsburgh is testing a system that would provide centrally-tracked branded samples alongside free samples of reliable, generic medications with well-established records of safety and effectiveness.

How will students learn to critically evaluate the sales pitches of drug representatives if they don't interact with them during training?

One study looked at this precise question by comparing two similar academic medical centers, one of which instituted a policy that banned drug representatives from the hospital. Physicians who had completed their residency at that hospital during the ban were found to be *more* skeptical of drug reps than either physicians who had trained at the comparison hospital during the same period or physicians who had trained at the same hospital before the ban. The physicians who had trained under the ban were less than half as likely to find information from reps beneficial in guiding their practice, and ultimately these physicians chose to have less contact with sales representatives (McCormick et al. 2001).

This result is not surprising. Rarely, if ever, are students taught how to critically evaluate the claims of drug reps when they interact with them on the wards. At the same time, teaching students how to critically evaluate medical evidence does not require the presence of sales representatives; it requires training in research methods and statistics. Moreover, the absence of sales representatives sends a powerful message—that physicians should not rely on marketing for their education or seek out advertisements for information on patient care. Habits acquired in training – whether they be to read comprehensive evidence summaries or to rely on industry marketing – are often sustained throughout physicians' careers.

What about schools that don't own their own hospitals? They cannot control the clinical settings.

Even schools that do not own their own hospitals can make policies that govern the behavior of their faculty, residents, and students. These rules may include, for example, that faculty may not accept drug samples or meet with marketing representatives.

The larger point is that medical schools and the hospitals in which their students and residents train depend on each other, even if they are owned separately. The schools work together with the hospitals to provide a high-quality training environment; part of that should be ensuring the practice of evidenced-based medicine that is free from the influence of marketing. Students who are deciding where to go to medical school or residency will inevitably take into account the hospital environment, regardless of who owns the hospitals. Medical schools should work with their affiliated hospitals to create comprehensive conflict-of-interest policies, which ultimately advance the quality of medical education and clinical care.

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