

Physicians and Drug Representatives: Exploring the Dynamics of the Relationship

Susan Chimonas¹, Troyen A. Brennan², and David J. Rothman¹

¹Center on Medicine as a Profession, Columbia University, 630 West 168th Street, P&S Box 11, New York, NY 10032, USA; ²Aetna, Inc., Hartford, CT, USA.

BACKGROUND: Interactions between physicians and drug representatives are common, even though research shows that physicians understand the conflict of interest between marketing and patient care. Little is known about how physicians resolve this contradiction.

OBJECTIVE: To determine physicians' techniques for managing cognitive inconsistencies within their relationships with drug representatives.

DESIGN, SETTING, AND PARTICIPANTS: Six focus groups were conducted with 32 academic and community physicians in San Diego, Atlanta, and Chicago.

MEASUREMENTS: Qualitative analysis of focus group transcripts to determine physicians' attitudes towards conflict of interest and detailing, their beliefs about the quality of information conveyed and the impact on prescribing, and their resolution of the conflict between detailers' desire to sell product and patient care.

RESULTS: Physicians understood the concept of conflict of interest and applied it to relationships with detailers. However, they maintained favorable views of physician-detailer exchanges. Holding these mutually contradictory attitudes, physicians were in a position of cognitive dissonance. To resolve the dissonance, they used a variety of denials and rationalizations: They avoided thinking about the conflict of interest, they disagreed that industry relationships affected physician behavior, they denied responsibility for the problem, they enumerated techniques for remaining impartial, and they reasoned that meetings with detailers were educational and benefited patients.

CONCLUSIONS: Although physicians understood the concept of conflict of interest, relationships with detailers set up psychological dynamics that influenced their reasoning. Our findings suggest that voluntary guidelines, like those proposed by most major medical societies, are inadequate. It may be that only the prohibition of physician-detailer interactions will be effective.

KEY WORDS: physician behavior; professionalism; social science; qualitative research; health policy.
DOI: 10.1007/s11606-006-0041-z
© 2007 Society of General Internal Medicine 2007;22:184–190

Received April 27, 2006

Revised August 3, 2006

Accepted October 2, 2006

Published online January 17, 2007

INTRODUCTION

One of the most pressing problems in American health care is conflict of interest. Medicine is now a \$2-trillion industry, and conflicts frequently arise when physicians' "interests or commitments compromise their independent judgment or their loyalty to patients."¹ Financial-incentive structures in managed care create potential conflicts between physicians' desire to maximize their income and the patients' best interests.² Researchers funded by industry face "an implicit demand for a positive finding to obtain further financial support."³

Among the most prevalent conflicts of interest are those arising from physicians' interactions with drug company sales representatives, or "detailers." Pharmaceutical companies employ about 90,000 detailers and spend over \$7 billion annually to market their products to physicians, averaging \$15,000 per year per physician.⁴ Prescribing decisions can become conflicted by free gifts, meals, travel, and other benefits. Because physician-detailer interactions bias medical decision-making, undermine public trust, and increase healthcare costs,^{5–10} the medical profession is now under unprecedented pressure to "recognize, disclose to the general public, and deal with conflicts of interest."¹¹

We sought to investigate the extent to which individual physicians "recognize, disclose, and deal with" conflicts of interest in interactions with detailers. We used focus groups to explore physicians' beliefs about these interactions and their techniques for managing the conflicts between marketing and patient care. We then considered the implications of our findings for policies to manage conflict of interest.

PHYSICIANS' ATTITUDES TOWARDS DRUG REPRESENTATIVES

Although previous survey research has quantified physicians' attitudes towards detailers, puzzling contradictions and incongruities remain. Surveys indicate that physicians generally view interactions with detailers as educational and professionally appropriate.^{12,13} Yet, physicians also report that detailing provides biased information and can compromise objectivity.^{14–18} Most physicians contend that their colleagues are susceptible to the industry's influence but feel personally invulnerable: In one study, 61% of residents felt that interactions with pharmaceutical representatives did not alter their own behavior, but only 16% felt that others were similarly unaffected.¹⁹ Another study found that 75% of attending physicians believed that pharmaceutical marketing affects residents' prescribing, but only 49% of residents agreed.¹⁸

Inconsistencies also pervade physicians' attitudes towards gifts from detailers. Most generally approve of gifts¹⁹ and believe accepting them is appropriate because they learn about new products.¹⁸ However, physicians do not want gift relationships made public²⁰ and they acknowledge that gifts can compromise objectivity.¹⁶

These surveys identify a striking contrast between physicians' awareness of the negative effects of detailing and their approval of the relationships. To analyze how physicians resolve this contradiction and to explore the policy implications, we conducted a series of focus groups. This methodology was selected not to quantify the distribution of physicians' attitudes but to go beyond survey findings to an in-depth investigation of physicians' reasoning. Focus groups offered an excellent format for exploring how physicians managed the inherent conflict between the manufacturer's desire to sell a product and their own commitment to scientific integrity and patient care. We hypothesized that physicians might use some of the same psychological mechanisms identified by cognitive dissonance theory. Our research supports that hypothesis. Our findings also suggest that physicians have so many ways of justifying their relationships with detailers that conflict-of-interest policies based on self-regulation are unlikely to succeed.

COGNITIVE DISSONANCE

The concept of cognitive dissonance was originated by Leon Festinger. After infiltrating a cult that believed that a flood would destroy the earth on December 21, 1954, Festinger analyzed the reactions when no flood occurred. He found that the more dedicated members were to the cult, the more likely they were to reinterpret the evidence to reaffirm their beliefs. While fringe members tended to acknowledge their error and abandon the cult, committed members insisted that their beliefs had been correct. Their faithfulness prevented the flood.²¹

Building on these observations and later experiments, Festinger posited that people prefer their beliefs to be consistent with each other. When cognitions are dissonant—when people “find themselves doing things that don't fit with what they know, or having opinions that do not fit with other opinions they hold”²²—they experience discomfort and attempt to reduce the dissonance. The greater the dissonance, the greater the effort. While dissonance can occur when any 2 or more cognitions conflict, it is strongest when it pertains to self-image.²²

Physicians face dissonance by interacting with detailers and knowing that such encounters are intended to influence prescribing. They recognize that these relationships may compromise medical practice and that new regulations are being promulgated to manage the problem. Because these relationships potentially undermine physicians' moral identity as altruistic practitioners, physicians should be strongly motivated to resolve the dissonance. Accordingly, our focus groups first probed physicians' awareness of conflicts of interest in interactions with detailers and then explored the means by which they managed the dissonance.

METHODS

In June 2004, using standard techniques,²³ a trained moderator led 6 60-minute sessions, following detailed discussion guides composed by the authors (available online at [http://](http://www.imapny.org)

www.imapny.org). A market research firm recruited the subjects from a database of individuals that had previously expressed interest in participating in focus groups. The purpose identified in the recruitment invitation was to discuss “interactions between physicians and the pharmaceutical industry.” Excluded were physicians who had a direct relationship with employees in the media or health industries. All sessions were audiotaped.

To capture possible variations by geographic region and medical specialty, separate groups were held with primary care physicians and specialists in San Diego, Atlanta, and Chicago. The groups had an average of 5 participants (the range was 4 to 7). Group size reflected the principle that “small groups work best when the participants are likely to be interested in the topic...and when the researcher desires a strong sense of each participant's reaction.”²³ Institutional review boards at Columbia University's Medical Center and at Harvard University's School of Public Health approved the study, and participants gave written informed consent.

Thirty-two academic and community physicians participated—18 primary care and 14 specialists. Specialties included were thoracic surgery, hematology, oncology, cardiology, infectious disease, urology, orthopedics, gastroenterology, pulmonology, and geriatric medicine. A majority (59%) were in private practice, and more than two-thirds (69%) had practiced over 10 years. Eighty-four percent were male (Table 1).

The focus groups opened by discussing the term “conflict of interest.” Participants were asked to define the term and to discuss whether it concerned them, their colleagues, or their patients. Participants were also asked to share any personal experiences with conflicts. The moderator then introduced a hypothetical situation:

It is common for representatives from drug companies to spend time talking to doctors to promote their company's products. At these meetings, the doctor may receive a gift from the representative—something modest like a pen or a notepad, or something more substantial, like the salesperson might buy the doctor a meal at a fancy restaurant, tickets to a sporting event, or a trip to a ski resort.

The moderator asked if participants had any positive or negative feelings about the situation, if they had personally experienced it, and if it constituted a conflict of interest. The moderator asked whether the gift's value was relevant. To further gauge attitudes, the moderator asked for reactions to a study demonstrating that relationships with industry influenced physician behavior.

Table 1. Characteristics of Focus Group Participants

	Primary care (n=18)	Specialists (n=14)	All physicians (n=32)
No. (%) male	16 (89)	11 (79)	27 (84)
No. (%) in practice			
1–10 years	5 (28)	5 (36)	10 (31)
11–20 years	8 (44)	6 (43)	14 (44)
20+ years	5 (28)	3 (21)	8 (25)
No. (%) in private practice	11 (61)	8 (57)	19 (59)

Two investigators (SC and DJR) observed the sessions. One investigator (SC) and a research assistant reviewed the transcribed audiotapes to identify major themes. Transcripts were manually coded for the presence of each theme (understanding of conflict of interest, attitudes towards drug representatives, and responses to research findings). Differences of opinion in the coding process were discussed and resolved. Because focus group methods are appropriate for assessing similarities but not differences among participants, only themes that appeared in all 6 focus groups were analyzed.

RESULTS

Acknowledging Conflicts of Interest

The contradiction between participants' approval of detailing and their awareness of the inherent conflict of interest emerged clearly. Working definitions of the concept of conflict of interest came easily:

In the medical context, obviously you're the fiduciary for the patient, and if you're doing something for your economic interest, it's not in the best interest of the patient. That's a conflict of interest if you act on that.

Conflict of interest is something supplanting what's best for the patient with external factors. They can be monetary, prejudice, personal, whatever it is, but some external factor that delays or changes what you do that's not best for the patient.

Participants took their examples, spontaneously and repeatedly, from managed care (prepayment or capitated health plans) and described these conflicts in personal terms. They expressed concern about how they and the profession were inescapably caught up in these conflicts:

We're all conflicted. Prior to managed care...we profited from ordering what we did. The more we ordered, the more we billed, and it was a fee per service pay scale. We profited from that structure...With capitation and managed care the opposite occurred. The less you did the more you did in take-off. In our industry, it's inherent.

Physicians readily acknowledged that the problem was relevant to pharmaceutical representatives:

They're dropping off pens and pads [because] drug reps want sales.

These things can be a form of kickback.

Welcoming Interactions with Detailers

Recognizing conflict of interest did not inhibit physicians' interactions with detailers. They welcomed the interactions, describing detailers as pleasant, friendly, and helpful, not as calculating salespersons: "It's nice to have a nice relationship" and "It's nice to see the people constantly." Participants

also explained that they liked receiving gifts and regretted that gifts had become more "modest"²⁴:

I'll be honest, I miss getting the [sporting event] tickets.

It's just basically educational materials now. I heard of some golf outings...but it's predominantly educational materials. I think they've kind of cracked down and got more stringent policies...The golden era is gone for physicians [laughter].

Regulatory efforts irritated the physicians. They resented limitations on entertainment and other personal-use gifts recommended by Pharmaceutical Research and Manufacturers of America (PhRMA) (the industry trade association) and endorsed by the Office of the Inspector General of Health and Human Services^{25,26}:

The rules are very strict now.

We're still getting dinners and pens and pencils and stuff like that. Much less than it used to be...I think the PhRMA Code is still a little too strict.

They particularly objected to excluding spouses from industry-sponsored events:

We're not allowed to bring our significant others to dinners...I think it's ridiculous, insulting...not to be able to spend an extra hour or two with our wives while we're getting an education.

These restrictions, they insisted, were unfair and unnecessary. One physician referred to the PhRMA Code as "the Doofus Code."

MANAGING COGNITIVE DISSONANCE

Cognitive dissonance theory is a useful frame for understanding the contradictory nature of physician reasoning. It specifies 3 methods, not mutually exclusive, by which people manage or reduce dissonance²²: (1) eliminating the dissonance, by altering 1 or more of the conflicting attitudes or behaviors; (2) rationalization, by using additional information to reduce dissonance between the conflicting cognitions; and (3) denial, by forgetting or rejecting the significance of 1 or more of the conflicting elements.

The first option is often difficult or painful: It requires giving up a pleasurable behavior or a closely held belief and provokes feelings of foolishness, regret, or immorality. The other 2 options often work well: Most people "are clever enough to come up with ad hoc hypotheses or rationalizations to save cherished notions," or they simply deny the existence of the contradiction.²⁷

The option of eliminating the dissonance would require physicians not to interact with detailers. No participant in our focus groups reported shunning detailers; rather, they provided a variety of rationalizations and denials, often contradictory. Participants, however, did not comment on the logical inconsistencies.

Ignoring the Issue

Participants declared that they “rarely think about” conflict of interest, although they might occasionally discuss it with close colleagues:

It's not something you generally wind up talking about.

I don't think it's a big discussion [topic] with people, without really knowing who they're talking to. If you're either saying the wrong thing or getting people to think that they do things that they shouldn't do.

They also reported devoting little time to considering how best to resolve conflicts.

Avoiding Responsibility

Physicians denied responsibility for conflicts of interest, describing the root causes as external, whether they involved managed care or pharmaceutical companies:

There's always a conflict of interest, every time you decide to do a test there's a conflict of interest...Every time you do it you're going to get a benefit from it. There's a conflict of interest in the procedure.

I own stock in major pharmaceutical companies. And I prescribe their products. So is that a conflict of interest?...You cannot escape writing Pfizer medications. Today everything is owned by Pfizer. But it's my way of telling you that it [happens] at all levels.

Similarly, participants addressed conflicts involving drug representatives in impersonal terms. The pronouns “we” and “I,” which often appeared in their discussions of managed care conflicts, were replaced by “they” and “them”:

It's obviously an issue in medicine where, for example, a physician's relationship with a drug company may influence them to use those drugs.

The acceptance [of gifts] is a relative conflict of interest from the standpoint that it costs the pharmaceutical companies money to provide whatever it is they are providing, and that is added to the cost of the medication for the patient.

Emphasizing Benefits

Physicians emphasized the educational aspects of relationships with detailers. They repeatedly stated that their overriding purpose was to exchange medical information:

I don't think it's a conflict of interest. It's a way of getting you to learn about a product.

They just tell you about their product and you learn about it. A lot of the things I know about the new drugs, I learned from the pharmaceutical representatives.

Physicians also explained that detailers provided drug samples. Although they admitted that samples affected prescribing, they emphasized the benefits to patients:

Sometimes you tend to return a favor when you get a lot of samples, thinking of patients who are self-pays. You tend to write a little more so they will come back and give you more samples

I'm more influenced by having enough medication to give my patients some so they can try and see what within that class of medication is effective.

Physicians added that samples strengthened relationships with patients, insured or not.

Dismissing Harms

Physicians denied being influenced by pharmaceutical representatives:

I just prescribe the medication that is best for the patient.

You practice medicine in an ethical fashion...You accepted the perks that were offered, but personally it never made any difference in what I have or have not prescribed.

We get the lunches, the house staff may enjoy it, but I haven't seen it influence.

Physicians went on to identify strategies for remaining impartial. Most often, they described taking information from representatives “with a grain of salt”:

I take a lot of it with a grain of salt. It presents information but it's always going to be in their best interest.

They try for education with a spin.

Ninety percent of what they're telling you is propaganda. I don't mind hearing their spin, I just take it with the appropriate grain of salt.

The “grain of salt” argument would seem to contradict the claim that exchanges with detailers were educational, but physicians often expressed these 2 contradictory positions simultaneously. Despite “spin” and “propaganda,” physicians welcomed “educational” information from representatives and were confident of their ability to evaluate detailers' claims.

Some physicians insisted that receiving information from competing companies protected them against bias:

One class of drugs has five products, [so] five reps are coming in to talk to you. It is not like one rep is coming and that is [all you hear]...So, the five people come. We listen to the five people about their products, and we think about the pros and what is best for the patients.

Some physicians acknowledged that relationships with detailers influenced their prescribing:

They've got you because they gave you the samples, you [dispensed] it, you start a patient on the samples.

The drug companies give them out for a reason...they want you to become accustomed to the medication. They want it embedded in your mind.

However, they insisted that such behavior had no negative impact on patient care because influence occurred only when products were equal:

Why not [prescribe the representative's drug], because these are two equal drugs, and you are coming and being nice and being helpful to the staff and whatever... I'm not hurting my patient. I'm using your drug because you are nicer. What is wrong with that? I don't think there is any conflict of interest.

[Take] two very similar medications both on the formulary. If I have a very nice rep, and I, you know—one time I was invited to a nice restaurant I can't afford on my own. I probably will prescribe [that company's drug], but that's so minor. I mean, what I tend to do is prescribe all across the board.

Physician Responses to Research Findings

The moderator presented physicians with results from a well-known study⁵:

Meetings with pharmaceutical representatives were associated with requests by physicians for adding the drugs to the hospital formulary and changes in prescribing practice. Drug company-sponsored continuing medical education (CME) preferentially highlighted the sponsor's drug(s) compared with other CME programs. Attending sponsored CME events and accepting funding for travel or lodging for educational symposia were associated with increased prescription rates of the sponsor's medication. Attending presentations given by pharmaceutical representative speakers was also associated with nonrational prescribing.

A few physicians accepted the findings at face value, recounting how *other* physicians were influenced:

I'm [on] the formulary [committee] at my hospital, and every time we meet, we have requests for new drugs. And we know that the drug reps go to the doctor with a letter, and all the doc has to do is sign the letter and send it to the formulary committee. And they do it all the time.

That's where the conflict comes in. [The drugs] are all the same. There are doctors that, if they're wined and dined, they're going to prescribe that out of loyalty.

Most participants, however, disputed the study. Some superficially accepted the findings but provided their own,

positive interpretations of the data. Physicians, for example, were applying new knowledge they had gained:

Why should it be a conflict of interest just because physicians attended a meeting and remember a product and use it?

If I go and teach him about [a drug], and he uses [it], is that necessarily a bad thing? Or if I learn because I went to his lecture...for God's sake is it bad that I now prescribe?

Others argued that prescribing a new drug recommended by a representative served a scientific or therapeutic process, as if physicians were skillfully testing the efficacy of new products:

In my opinion, you've got to see how the drug works. That's not a conflict of interest.

You see an ad on TV for a new, similar product. Would you try it and see if it's better than the one you use? So there's going to be more sales, but if it's not as good, or if it's worse, the sales will [fall].

Physicians again reasoned that no harm occurred because the drugs prescribed were safe and effective:

Just because you attend a meeting that's sponsored by a pharmaceutical company doesn't mean that that drug is really not good and effective.

It's not necessarily bad if you go to a Lipitor CME and prescribe a little more Lipitor at the expense of Zocor or [another competitor]. That's not bad. Yes, it is influenced prescribing, but it's not bad...[The drugs are] all good.

In essence, they overlooked the conflict and cited the general efficacy of approved pharmaceuticals.

Some physicians insisted that no conflict existed so long as the physician did not knowingly harm the patient:

The conflict of interest would be if I used the drug and I knew it didn't work, and I still continued to try it.

[The problem would be] something that influences prescribing to a disadvantage to the patient, and you know it's a disadvantage to the patient...You know it, and you do it anyway.

In sum, physicians offered alternative analyses that minimized the study's implications. No one discussed relative cost or efficacy.

DISCUSSION: IMPLICATIONS FOR MANAGING CONFLICTS OF INTEREST

Cognitive inconsistencies permeated the focus group discussions. Although physicians recognized the inherent conflicts of interest, they defended their interactions with drug representatives. Physicians invoked a variety of mechanisms to resolve

the apparent dissonance: They avoided acknowledging the problem and their part in it; they justified the interactions as not only harmless but also beneficial; and, when confronted with evidence to the contrary, they reinterpreted the data to maintain their beliefs.

Most medical organizations, including the American Medical Association²⁴ and the American College of Physicians,²⁸ have endorsed voluntary guidelines similar to the PhRMA Code, but they prohibit only the most egregious practices, such as gifts with explicit “strings attached,” and make no provisions for monitoring or enforcement.²⁹ Given physicians’ attitudes, even these minimal standards are not likely to succeed, nor is formal physician education likely to suffice.³⁰ Communicating data, whether through medical newsletters or “counter-detailing,” is important but insufficient to offset prevailing attitudes and practices. One longitudinal study recently reported that, despite an educational intervention, residents’ attitudes toward detailers became more positive with continued interaction.³¹

Given physicians’ techniques for managing dissonance, it appears that only the prohibition of physician–detailer interactions will be effective.²⁹ This position is now gaining popularity. Some HMOs (including Kaiser Permanente) and a growing number of medical centers are restricting detailers’ access to staff and are devising strategies to control conflicts of interest.^{29,32}

Government regulation is also increasing. The Office of the Inspector General at the Department of Health and Human Services endorsed the PhRMA Code in 2003 and, going further, now requires companies to separate medical education grant-making from their sales and marketing departments.²⁶ At the state level, California compels companies to declare an annual dollar limit on gifts to individual providers.³³ Vermont, Maine, Minnesota, West Virginia, and the District of Columbia require pharmaceutical companies to report gifts and payments to healthcare providers.^{34,35} Michigan, Nevada, New Jersey, New York, and Washington are considering similar bills, and Maryland and Connecticut are contemplating banning all gifts.³⁶

Our study has several limitations. Thirty-two physicians in 3 geographic areas participated, which may limit the generalizability of our analysis. Qualitative methods do not allow for determining the proportion of physicians who held any given attitude. Nonetheless, the themes reported recurred in all focus groups, enhancing the likelihood that they accurately reflect physicians’ general attitudes. Participants may also have downplayed and underreported their interactions with drug representatives—but such a bias would give our findings added strength.

In the end, it would be preferable were individual physicians, mindful of the principles of medical professionalism, to reduce or eliminate interactions with drug representatives. Our findings, however, suggest that physicians’ techniques for managing cognitive dissonance render this prospect unlikely. Because physicians are not prone to policing themselves, the growing likelihood is that they will be policed by others.

Acknowledgments: This research was supported by the Institute on Medicine as a Profession (IMAP) and the American Board of Internal Medicine (ABIM) Foundation. The authors thank their colleagues on the ABIM–IMAP committee that explored the management of physician conflicts of interest.

Potential Financial Conflicts of Interest: None disclosed.

Corresponding Author: David J. Rothman, Center on Medicine as a Profession, Columbia University, 630 West 168th Street, P&S Box 11, New York, NY 10032, USA (e-mail: djr5@columbia.edu).

REFERENCES

1. **Rodwin MA.** *Medicine, Money, and Morals: Physicians’ Conflict of Interest.* Oxford: Oxford University Press; 1993.
2. **Murray T.** Conflict of interest in the professions. *N Engl J Med.* 2002; 346:1835–6.
3. **Dana J, Lowenstein G.** A social science perspective on gifts to physicians from industry. *JAMA.* 2003;290(2):252–5.
4. Consumers Union. Requiring Drug Companies to Disclose Marketing Expenditures to Physicians. Available at http://www.consumersunion.org/campaigns/learn_more/001813indiv.html. Accessed April 21, 2006.
5. **Wazana A.** Physicians and the pharmaceutical industry: Is a gift ever just a gift? *JAMA.* 2000;283:373–80.
6. **Lexchin J.** Interactions between physicians and the pharmaceutical industry: What does the literature say? *Can Med Assoc J.* 1993; 149:1401–7.
7. **Pear R.** Drug industry is told to stop gifts to doctors. *The New York Times.* October 1, 2002:A1.
8. **Chimonas S, Rothman DJ.** New federal guidelines for physician–pharmaceutical industry relations: the politics of policy formation. *Health Aff.* 2005;24.4:949–60.
9. **Studdert DM, Mello MM, Brennan TA.** Financial conflicts of interest in physician relationships with the pharmaceutical industry: Self-regulation in the shadow of federal prosecution. *N Engl J Med.* 2004; 351:1891–1900.
10. **Anderson T.** “Drug launches and the impact of pharmaceutical promotion on physician treatment decisions.” Report presented at Prudential Financial/ImpactRx Joint Industry Conference, Omni Berkshire Place, New York, NY, June 20, 2003. Available at http://www.impactrx.com/pdfs/Prudential_Financial_ImpactRx_Joint_Industry_Conference.pdf. Accessed August 23, 2005.
11. Medical Professionalism Project. Medical professionalism in the new millennium: a physician charter. *Ann Intern Med.* 2002;136:243–46.
12. **Brett AS, Burr W, Moloo J.** Are gifts from pharmaceutical companies ethically problematic? A survey of physicians. *Arch Intern Med.* 2003; 163:2213–18.
13. **Reeder M, Dougherty J, White L.** Pharmaceutical representatives and emergency medicine residents: a national survey. *Ann Emerg Med.* 1993; 22:1593–6.
14. **Hodges B.** Interactions with the pharmaceutical industry: experiences and attitudes of psychiatry residents, interns, and clerks. *Can Med Assoc J.* 1995;153:553–9.
15. **Sergeant M, Hodgetts P, Godwin M, Walker D, McHenry P.** Interactions with the pharmaceutical industry: a survey of family medicine residents in Ontario. *Can Med Assoc J.* 1996;155:1243–8.
16. **McKinney WP, Schiedermaier DL, Lurie N, Simpson DE, Goodman JL, Rich, EC.** Attitudes of internal medicine faculty and residents toward professional interaction with pharmaceutical sales representatives. *JAMA.* 1990;264:1693–7.
17. **Banks J, Mainous A.** Attitudes of medical school faculty toward gifts from the pharmaceutical industry. *Acad Med.* 1992;67:610–12.
18. **Keim S, Sanders A, Witzke D, Dyne P, Fulginiti J.** Beliefs and practices of emergency medicine faculty and residents regarding professional interactions with the biomedical industry. *Ann Emerg Med.* 1993;22:1576–81.
19. **Steinman M, Shlipak M, McPhee S.** Of principles and pens: attitudes and practices of medicine house staff toward pharmaceutical industry promotions. *Am J Med.* 2001;110:551–7.
20. **Madhavan S, Amonkar M, Elliott D, Burke K, Gore P.** The gift relationship between pharmaceutical companies and physicians: an exploratory survey of physicians. *J Clin Pharm Ther.* 1997;22:207–15.
21. **Festinger L, Riecken H, Schachter S.** *When Prophecy Fails.* Minneapolis, MN: Lund Press; 1956.
22. **Festinger L.** *A Theory of Cognitive Dissonance.* Stanford, CA: Stanford University Press; 1957.
23. **Morgan D.** *Focus Groups as Qualitative Research.* 2nd edition. Thousand Oaks, CA: Sage Publications; 1997.

24. American Medical Association. "Gifts to physicians from industry." *JAMA* 1991;265:501.
25. Pharmaceutical Research and Manufacturers of America. "PhRMA code on interactions with healthcare professionals." Available at <http://www.phrma.org/files/PhRMA%20code.pdf>. Accessed December 8, 2006.
26. Office of the Inspector General. Compliance program guidance for pharmaceutical manufacturers. *Fed Regist*. 2003;68,86:23731-43.
27. **Carroll R**. "Cognitive dissonance." *The Skeptic's Dictionary: A Collection of Strange Beliefs, Amusing Deceptions, and Dangerous Delusions*. Hoboken, NJ: John Wiley & Sons; 2003.
28. **Coyle S**. Physician-industry relations. Part 1: individual physicians. *Ann Intern Med*. 2002;136:396-402.
29. **Brennan TA, Rothman DJ, Blank L, et al**. Health industry practices that create conflicts of interest: A policy proposal for academic medical centers. *JAMA*. 2006;295,4:429-33.
30. **Hensley S**. "As Drug Bill Soars, Some Doctors Get an 'Unsales' Pitch." *The Wall Street Journal*. March 13, 2006;A1.
31. **Schneider JA, Arora V, Kasza K, Van Harrison R, Humphrey H**. Residents' perceptions over time of pharmaceutical industry: interactions and gifts and the effect of an educational intervention. *Acad Med*. 2006;81(7):595-602.
32. **Appleby J**. "Sales pitch: Drug firms use perks to push pills." *USA Today*. May 16, 2001;B1.
33. California Senate Bill 1765, Chapter 927, September 2004. Available at <http://www.venable.com/docs/pubs/1204.pdf>. Accessed December 8, 2006.
34. **Allen D**. "Drug companies woo Vermont doctors." *The Barre Montpelier Times (Argus and Rutland Herald)*. May 29, 2005: A1, A6.
35. Vermont Pharmaceutical Manufacturer Gift Disclosure Law (33 V.S.A. § 2005). Available at <http://www.atg.state.vt.us/display.php?smod=177>. Accessed August 23, 2005.
36. Arnold & Porter, LLP. "Pharmaceutical Companies Face New State Marketing Disclosure Laws. Arnold & Porter Update." Available at http://www.arnoldporter.com/pubs/files/Pharma_Marketing_Disclosure_Laws.PDF. Accessed March 17, 2006.