

Following the Script: How Drug Reps Make Friends and Influence Doctors

Adriane Fugh-Berman*, Shahram Ahari

It's my job to figure out what a physician's price is. For some it's dinner at the finest restaurants, for others it's enough convincing data to let them prescribe confidently and for others it's my attention and friendship...but at the most basic level, everything is for sale and everything is an exchange.

—Shahram Ahari

You are absolutely buying love.

—James Reidy [1]

In 2000, pharmaceutical companies spent more than 15.7 billion dollars on promoting prescription drugs in the United States [2]. More than 4.8 billion dollars was spent on detailing, the one-on-one promotion of drugs to doctors by pharmaceutical sales representatives, commonly called drug reps. The average sales force expenditure for pharmaceutical companies is \$875 million annually [3].

Unlike the door-to-door vendors of cosmetics and vacuum cleaners, drug reps do not sell their product directly to buyers. Consumers pay for prescription drugs, but physicians control access. Drug reps increase drug sales by influencing physicians, and they do so with finely titrated doses of friendship. This article, which grew out of conversations between a former drug rep (SA) and a physician who researches pharmaceutical marketing (AFB), reveals the strategies used by reps to manipulate physician prescribing.

Better Than You Know Yourself

During training, I was told, when you're out to dinner with a doctor, "The physician is eating with a friend. You are eating with a client."

—Shahram Ahari

Reps may be genuinely friendly, but they are not genuine friends. Drug reps are selected for their presentability and outgoing natures, and are trained to be observant, personable,

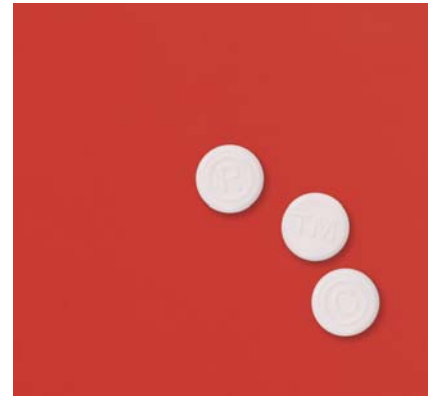
and helpful. They are also trained to assess physicians' personalities, practice styles, and preferences, and to relay this information back to the company. Personal information may be more important than prescribing preferences. Reps ask for and remember details about a physician's family life, professional interests, and recreational pursuits. A photo on a desk presents an opportunity to inquire about family members and memorize whatever tidbits are offered (including names, birthdays, and interests); these are usually typed into a database after the encounter. Reps scour a doctor's office for objects—a tennis racquet, Russian novels, seventies rock music, fashion magazines, travel mementos, or cultural or religious symbols—that can be used to establish a personal connection with the doctor.

Good details are dynamic; the best reps tailor their messages constantly according to their client's reaction. A friendly physician makes the rep's job easy, because the rep can use the "friendship" to request favors, in the form of prescriptions. Physicians who view the relationship as a straightforward goods-for-prescriptions exchange are dealt with in a businesslike manner. Skeptical doctors who favor evidence over charm are approached respectfully, supplied with

Funding: This work was supported by a grant from the Attorney General Prescriber and Consumer Education Grant Program, created as part of a 2004 settlement between Warner-Lambert, a division of Pfizer, and the Attorneys General of 50 States and the District of Columbia, to settle allegations that Warner-Lambert conducted an unlawful marketing campaign for the drug Neurontin (gabapentin) that violated state consumer protection laws. No specific funding was received for this paper.

Competing Interests: Shahram Ahari is a former pharmaceutical sales representative for Eli Lilly, and the primary findings of this paper summarize points he made in testimony as a paid expert witness on the defendant's side in litigation against a New Hampshire law prohibiting the sale of prescription data. Adriane Fugh-Berman has accepted payment as an expert witness on the plaintiff's side in litigation regarding menopausal hormone therapy.

Citation: Fugh-Berman A, Ahari S (2007) Following the script: How drug reps make friends and influence



doi:10.1371/journal.pmed.0040150.g001

Figure 1. "Bitter Pills?" by net_efekt, at <http://www.flickr.com/photos/wheatfields/316337784/>, published under the Creative Commons Attribution License

reprints from the medical literature, and wooed as teachers. Physicians who refuse to see reps are detailed by proxy; their staff is dined and flattered in hopes that they will act as emissaries for a rep's messages. (See Table 1 for specific tactics used to manipulate physicians.)

Gifts create both expectation and obligation. "The importance of developing loyalty through gifting cannot be overstated," writes Michael Oldani, an anthropologist and former drug rep. Pharmaceutical gifting, however, involves carefully calibrated

doctors. PLoS Med 4(4): e150. doi:10.1371/journal.pmed.0040150

Copyright: © 2007 Fugh-Berman and Ahari. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abbreviations: AMA, American Medical Association

Adriane Fugh-Berman is an Associate Professor in the Department of Physiology and Biophysics, Georgetown University Medical Center, Washington, District of Columbia, United States of America. Shahram Ahari is with the School of Pharmacy, University of California San Francisco, San Francisco, California, United States of America.

* To whom correspondence should be addressed. E-mail: ajf29@georgetown.edu

The Policy Forum allows health policy makers around the world to discuss challenges and opportunities for improving health care in their societies.

Table 1. Tactics for Manipulating Physicians

Physician Category	Technique	How It Sells Drugs	Comments
Friendly and outgoing	I frame everything as a gesture of friendship. I give them free samples not because it's my job, but because I like them so much. I provide office lunches because visiting them is such a pleasant relief from all the other docs. My drugs rarely get mentioned by me during our dinners.	Just being friends with most of my docs seemed to have some natural basic effect on their prescribing habits. When the time is ripe, I lean on my "friendship" to leverage more patients to my drugs...say, because it'll help me meet quota or it will impress my manager, or it's crucial for my career.	Outgoing, friendly physicians are every rep's favorite because cultivating friendship is a mutual aim. While this may be genuine behavior on the doctor's side, it is usually calculated on the part of the rep.
Aloof and skeptical	I visit the office with journal articles that specifically counter the doctor's perceptions of the shortcoming of my drug. Armed with the articles and having hopefully scheduled a 20 minute appointment (so the doc can't escape), I play dumb and have the doc explain to me the significance of my article.	The only thing that remains is for me to be just aggressive enough to ask the doc to try my drug in situations that wouldn't have been considered before, based on the physician's own explanation.	Humility is a common approach to physicians who pride themselves on practicing evidence-based medicine. These docs are tough to persuade but not impossible. Typically, attempts at geniality are only marginally effective.
Mercenary	The best mercenary docs are typically found further down the prescribing power scale. There are plenty of 6's, 7's, and 8's who are eagerly mercenary but simply don't have the attention they desire fawned on them. I pick a handful out and make them feel special enough with an eye towards the projected demand on my limited resources in mind. Basically, the common motif to docs whom you want to "buy out" is to closely associate your resource expenditure with an expectation—e.g., "So, doc, you'll choose Drug X for the next 5 patients who are depressed and with low energy? Oh, and don't forget dinner at Nobu next month. I'd love to meet your wife."	This is the closest drug-repping comes to a commercial exchange. Delivering such closely associated messages crudely would be deemed insulting for most docs so a rep really has to feel comfortable about their mercenary nature and have a natural tone when making such suggestions.	Drug reps usually feel more camaraderie with competing reps than they do with their clients. Thus, when a doctor fails to fulfill their end of the prescriptions-for-dinners bargain, news gets around and other reps are less likely to invest resources in them.
High-prescribers	I rely on making a strong personal connection to those docs, something to make me stand out from the crowd.	Friendship sells. The highest prescribers (9's and 10's) are every reps sugar mommies and daddies. It's the equivalent of spitting in the ocean to try to buy these docs out because, chances are, every other rep is falling head over heels to do so.	The highest prescribers receive better presents. Some reps said their 10's might receive unrestricted "educational" grants so loosely restricted that they were the equivalent of a cash gift, although I did not personally provide any grants.
Prefers a competing drug	The first thing I want to understand is why they're using another drug as opposed to mine. If it's a question of attention, then I commit myself to lavishing them with it until they're bought. If they are convinced that the competitor drug works better in some patient populations, I frame my drug to either capture another market niche or, if I feel my drug would fare well in a comparison, I hammer its the superiority over the competing drug.	If, during the course of conversations, the doctors say something that may contradict their limited usage of our products, then the reps will badger them to justify that contradiction. This quickly transforms the rep from a welcomed reprieve to a nuisance, which can be useful in limited circumstances. We force the doctors to constantly explain their prescribing rationale, which is tiresome. Our intent is to engage in discourse but also to wear down the doc until he or she simply agrees to try the product for specific instances (we almost always argue for a specific patient profile for our drugs).	For reps this is a core function of our job. We're trained to do this in as benign a way as possible. No doc likes to be told their judgment is wrong so the latter method typically requires some discretion.
Acquiescent docs	Most docs think that if they simply agree with what the rep says, they'll outsmart the rep by avoiding any conflict or commitment, getting the samples and gifts they want, and finishing the encounter quickly. Nothing could be further from the truth The old adage is true, especially in pharmaceutical sales: there is no such thing as a free lunch.	From the outset of my training, I've been taught to frame every conversation to ultimately derive commitments from my clients. With every acquiescent nod to statements of my drugs superiority I build the case for them to increase their usage of my product. They may offer me false promises but I'll know when they're lying: the prescribing data is sufficiently detailed in my computer to confirm their behavior. Doctors who fail to honor their commitments, no matter how casually made, convert the rep into a badgering nuisance. The docs are often corralled into a conversational corner where they have to justify their previous acquiescence.	Gifts are used to enhance guilt and social pressure. Reps know that gifts create a subconscious obligation to reciprocate. New reps who doubt this phenomenon need only see their doctors' prescribing data trending upwards to be convinced. Of course, most of these doctors think themselves immune to such influence. This is an illusion reps try to maintain.

Table 1 Continued

Physician Category	Technique	How It Sells Drugs	Comments
No-see/ No-time (hard-to-see docs)	Occasionally docs refuse to see reps. Some do it for ethical reasons, but most simply lack the time. Even when I don't manage to see the doctor, I can still make a successful call by detailing the staff. Although they're on the doc's side for the most part, it's amazing how much trouble one can rile up when the staff are lavished with food and gifts during a credible sounding presentation and then asked to discuss the usage of a drug on their patients.	It's a victory for me just to learn from the staff about which drugs are preferred, and why. That info provides powerful ammunition to debate the docs with on the rare occasions that I might see them. However, it's a greater success when the staff discusses my meds with the doc after I leave. Because while a message delivered by a rep gets discounted, a detail delivered by a co-worker slips undetected and unfiltered under the guise of a conversation. And the response is usually better than what I might accomplish.	One's marketing success in a particular office can be strongly correlated to one's success in providing good food for the staff. Goodwill from the staff provides me with critical information, access, and an advocate for me and my drug when I'm not there.
Thought leaders	As a rep, I was always in pursuit of friendly "thought leaders" to groom for the speaking circuit. Once selected, a physician would give lectures around the district. I would carefully watch for tell-tale signs of their allegiance. This includes how they handled questions that criticized our product, how their prescribing habits fluctuated, or simply how eager they were to give their next lecture.	The main target of these gatherings is the speaker, whose appreciation may be reflected in increased prescribing of a company's products. Local speaking gigs are also auditions. Speakers with charisma, credentials, and an aura of integrity were elevated to the national circuit and, occasionally, given satellite telecast programs that offered CMEs.	Subtle and tactful spokespersons were the ideal candidates. I politely dismissed doctors who would play cheerleader for any drug...at the right price, of course.

These descriptions are based on SA's experience working for Eli Lilly and testimony in *IMS Health Inc. v. Ayotte*, US District Court, New Hampshire. Actual tactics may vary. doi:10.1371/journal.pmed.0040150.t001

generosity. Many prescribers receive pens, notepads, and coffee mugs, all items kept close at hand, ensuring that a targeted drug's name stays uppermost in a physician's subconscious mind. High prescribers receive higher-end presents, for example, silk ties or golf bags. As Oldani states, "The essence of pharmaceutical gifting...is 'bribes that aren't considered bribes'" [1].

Reps also recruit and audition "thought leaders" (physicians respected by their peers) to groom for the speaking circuit. Physicians invited and paid by a rep to speak to their peers may express their gratitude in increased prescriptions (see Table 1). Anything that improves the relationship between the rep and the client usually leads to improved market share.

Script Tracking

An official job description for a pharmaceutical sales rep would read: Provide health-care professionals with product information, answer their questions on the use of products, and deliver product samples. An unofficial, and more accurate, description would have been: Change the prescribing habits of physicians.

—James Reidy [4]

Pharmaceutical companies monitor the return on investment of detailing—and all promotional efforts—by prescription tracking. Information distribution companies, also called health

information organizations (including IMS Health, Dendrite, Verispan, and Wolters Kluwer), purchase prescription records from pharmacies. The majority of pharmacies sell these records; IMS Health, the largest information distribution company, procures records on about 70% of prescriptions filled in community pharmacies. Patient names are not included, and physicians may be identified only by state license number, Drug Enforcement Administration number, or a pharmacy-specific identifier [5]. Data that identify physicians only by numbers are linked to physician names through licensing agreements with the American Medical Association (AMA), which maintains the Physician Masterfile, a database containing demographic information on all US physicians (living or dead, member or non-member, licensed or non-licensed). In 2005, database product sales, including an unknown amount from licensing Masterfile information, provided more than \$44 million to the AMA [5].

Pharmaceutical companies are the primary customers for prescribing data, which are used both to identify "high-prescribers" and to track the effects of promotion. Physicians are ranked on a scale from one to ten based on how many prescriptions they write. Reps lavish high-prescribers with attention,

gifts, and unrestricted "educational" grants (Table 1). Cardiologists and other specialists write relatively few prescriptions, but are targeted because specialist prescriptions are perpetuated for years by primary care physicians, thus affecting market share.

Reps use prescribing data to see how many of a physician's patients receive specific drugs, how many prescriptions the physician writes for targeted and competing drugs, and how a physician's prescribing habits change over time. One training guide states that an "individual market share report for each physician...pinpoints a prescriber's current habits" and is



doi:10.1371/journal.pmed.0040150.g002

Figure 2. "Pills" by Rodrigo Senna, at <http://www.flickr.com/photos/negativz/74267002/>, published under the Creative Commons Attribution License

“used to identify which products are currently in favor with the physician in order to develop a strategy to change those prescriptions into Merck prescriptions” [6].

A *Pharmaceutical Executive* article states, “A physician’s prescribing value is a function of the opportunity to prescribe, plus his or her attitude toward prescribing, along with outside influences. By building these multiple dimensions into physicians profiles, it is possible to understand the ‘why’ behind the ‘what’ and ‘how’ of their behavior.” [7] To this end, some companies combine data sources. For example, Medical Marketing Service “enhances the AMA Masterfile with non-AMA data from a variety of sources to not only include demographic selections, but also behavioral and psychographic selections that help you to better target your perfect prospects” [8].

The goal of this demographic slicing and dicing is to identify physicians who are most susceptible to marketing efforts. One industry article suggests categorizing physicians as “hidden gems”: “Initially considered ‘low value’ because they are low prescribers, these physicians can change their prescribing habits after targeted, effective marketing.” “Growers” are “Physicians who are early adopters of a brand. Pharmaceutical companies employ retention strategies to continue to reinforce their growth behavior.” Physicians are considered “low value” “due to low category share and prescribing level” [9].

In an interview with *Pharmaceutical Representative*, Fred Marshall, president of Quantum Learning, explained, “... One type might be called ‘the spreader’ who uses a little bit of everybody’s product. The second type might be a ‘loyalist’, who’s very loyal to one particular product and uses it for most patient types. Another physician might be a ‘niche’ physician, who reserves our product only for a very narrowly defined patient type. And the idea in physician segmentation would be to have a different messaging strategy for each of those physician segments” [10].

In *Pharmaceutical Executive*, Ron Brand of IMS Consulting writes “...integrated segmentation analyzes individual prescribing behaviors, demographics, and psychographics



doi:10.1371/journal.pmed.0040150.g003

Figure 3. “Pills” by Sugar Pond, at <http://www.flickr.com/photos/sugarpond/236235191/>, published under the Creative Commons Attribution License

(attitudes, beliefs, and values) to fine-tune sales targets. For a particular product, for example, one segment might consist of price-sensitive physicians, another might include doctors loyal to a given manufacturer’s brand, and a third may include those unfriendly towards reps” [11].

In recent years, physicians have become aware of—and dismayed by—script tracking. In July 2006, the AMA launched the Prescribing Data Restriction Program (see <http://www.ama-assn.org/ama/pub/category/12054.html>), which allows physicians the opportunity to withhold most prescribing information from reps and their supervisors (anyone above that level, however, has full access to all data). According to an article in *Pharmaceutical Executive*, “Reps and direct managers can view the physician’s prescribing volume quantiled at the therapeutic class level” and can still view aggregated or segmented data including “categories into which the prescriber falls, such as an early-adopter of drugs, for example...” [12]. The pharmaceutical industry supports the Prescribing Data Restriction Program, which is seen as a less onerous alternative to, for example, state legislation passed in New Hampshire forbidding the sale of prescription data to commercial entities [13].

The Value of Samples

The purpose of supplying drug samples is to gain entry into doctors’ offices, and to habituate physicians to prescribing targeted drugs. Physicians appreciate samples, which can be used to start therapy immediately, test tolerance to a new drug, or reduce the total cost of a prescription. Even physicians who refuse to see drug reps usually want samples (these docs are denigrated as “sample-grabbers”). Patients like samples too; it’s nice to get a little present from the doctor. Samples also double as unacknowledged gifts to physicians and their staff. The convenience of an in-house pharmacy increases loyalty to both the reps and the drugs they represent.

Some physicians use samples to provide drugs to indigent patients [14,15]. Using samples for an entire course of treatment is anathema to pharmaceutical companies because this “cannibalizes” sales. Among the aims of one industry sample-tracking program are to “reallocate samples to high-opportunity prescribers most receptive to sampling as a promotional vehicle” and “identify prescribers who were oversampled and take corrective action immediately” [16].

Studies consistently show that samples influence prescribing choices [14,15,17]. Reps provide samples only of the most promoted, usually most expensive, drugs, and patients given a sample for part of a course of treatment almost always receive a prescription for the same drug.

Funding Friendship

While it’s the doctors’ job to treat patients and not to justify their actions, it’s my job to constantly sway the doctors. It’s a job I’m paid and trained to do. Doctors are neither trained nor paid to negotiate. Most of the time they don’t even realize that’s what they’re doing...

—Shahram Ahari

Drug costs now account for 10.7% of health-care expenditures in the US [18]. In 2004, spending for prescription drugs was \$188.5 billion, almost five times as much as what was spent in 1990 [19]. Between 1995 and 2005, the number of drug reps in the US increased from 38,000 to 100,000 [20], about one for every six physicians. The actual ratio is close to one drug rep per 2.5 targeted doctors [21], because not all physicians practice,

and not all practicing physicians are detailed. Low-prescribers are ignored by drug reps.

Physicians view drug information provided by reps as a convenient, if not entirely reliable, educational service. An industry survey found that more than half of “high-prescribing” doctors cited drug reps as their main source of information about new drugs [22]. In another study, three quarters of 2,608 practicing physicians found information provided by reps “very useful” (15%) or “somewhat useful” (59%) [23]. However, only 9% agreed that the information was “very accurate”; 72% thought the information was “somewhat accurate”; and 14% said that it was “not very” or “not at all” accurate.”

Whether or not physicians believe in the accuracy of information provided, detailing is extremely effective at changing prescribing behavior, which is why it is worth its substantial expense. The average annual income for a drug rep is \$81,700, which includes \$62,400 in base salary plus \$19,300 in bonuses. The average cost of recruiting, hiring, and training a new rep is estimated to be \$89,000 [24]. When expenses are added to income and training, pharmaceutical companies spend \$150,000 annually per primary care sales representative and \$330,000 per specialty sales representative [25]. An industry article states, “The pharmaceutical industry averages \$31.9 million in annual sales spending per primary-care drug...Sales spending for specialty drugs that treat a narrowed population segment average \$25.3 million per product across the industry.” [25]

Conclusion

As one of us (SA) explained in testimony in the litigation over New Hampshire’s new ban on the commercial sale of prescription data, the concept that reps provide necessary services to physicians and patients is a fiction. Pharmaceutical companies spend billions of dollars annually to ensure that physicians most susceptible to marketing prescribe the most expensive, most promoted drugs to the most people possible. The foundation of this influence is a sales force of 100,000 drug reps that provides rationed doses of samples,

gifts, services, and flattery to a subset of physicians. If detailing were an educational service, it would be provided to all physicians, not just those who affect market share.

Physicians are susceptible to corporate influence because they are overworked, overwhelmed with information and paperwork, and feel underappreciated. Cheerful and charming, bearing food and gifts, drug reps provide respite and sympathy; they appreciate how hard doctor’s lives are, and seem only to want to ease their burdens. But, as SA’s New Hampshire testimony reflects, every word, every courtesy, every gift, and every piece of information provided is carefully crafted, not to assist doctors or patients, but to increase market share for targeted drugs (see Table 1). In the interests of patients, physicians must reject the false friendship provided by reps. Physicians must rely on information on drugs from unconflicted sources, and seek friends among those who are not paid to be friends. ■

References

1. Elliott C (2006) The drug pushers. *Atlantic Monthly* (April): 2–13.
2. Rosenthal MB, Berndt ER, Donohue JM, Epstein AM, Frank RG (2003) Demand effects of recent changes in prescription drug promotion. Henry J Kaiser Family Foundation. Available: <http://www.kff.org/rxdrugs/6085-index.cfm>. Accessed 23 March 2007.
3. Niles S (2005) Sales force effectiveness (the third in a series of articles that examine problems and solutions of detailing to physicians). *Med Ad News* 24: 1.
4. Reidy J (2005) Hard sell: The evolution of a Viagra salesman. Kansas City: Andrews McMeel Publishing. 210 p.
5. Steinbrook R (2006) For sale: Physicians’ prescribing data. *New Engl J Med* 354: 2745–2747.
6. Merck (2002) Basic training participant guide. Available: <http://oversight.house.gov/features/vioxx/documents.asp>. Accessed 23 March 2007.
7. Nickum C, Kelly T (2005) Missing the mark(et). *Pharmaceutical Executive*. Available: <http://www.pharmexec.com/pharmexec/article/articleDetail.jsp?id=177968>. Accessed 23 March 2007.
8. Medical Marketing Services (2007) American Medical Association list. Available: http://www.mmslists.com/category_drilldown.asp?nav=category&headingID=1&itemID=1. Accessed 23 March 2007.
9. Hogg JJ (2006) Marketing to professionals: Diagnosing MD behavior. *Pharmaceutical Executive*: 168. Available: <http://www.pharmexec.com/pharmexec/article/articleDetail.jsp?id=162039>. Accessed 23 March 2007.
10. Hradecky G (2004) Breaking point. *Pharmaceutical Representative*. Available: <http://www.pharmrep.com/pharmrep/article/articleDetail.jsp?id=102324>. Accessed 23 March 2007.

11. Brand R, Kumar P (2003) Detailing gets personal: Integrated segmentation may be pharma’s key to “repersonalizing” the selling process. *Pharmaceutical Executive*. Available: <http://www.pharmexec.com/pharmexec/article/articleDetail.jsp?id=64071>. Accessed 23 March 2007.
12. Alonso J, Menzies D (2006) Just what the doctor ordered. *Pharmaceutical Executive*: 14–16. Available: <http://www.pharmexec.com/pharmexec/article/articleDetail.jsp?id=323314>. Accessed 23 March 2007.
13. Remus PC (2006 November 10) First-in-the-nation law pits NH against drug industry. *New Hampshire Business Review*. Available: <http://www.nh.com/apps/pbcs.dll/article?AID=/20061110/BUSINESSREVIEW05/61108030/-1/BUSINESSREVIEW>. Accessed 23 March 2007.
14. Chew LD, O’Young TS, Hazlet TK, Bradley KA, Maynard C, et al. (2000) A physician survey of the effect of drug sample availability on physicians’ behavior. *J Gen Intern Med* 15: 478–483.
15. Groves KEM, Sketris I, Tett SE (2003) Prescription drug samples—Does this marketing strategy counteract policies for quality use of medicines? *J Clin Pharm Ther* 28: 259–271.
16. Sadek H, Henderson Z (2004) It’s all in the details: Delivering the right information to the right rep at the right time can greatly increase sales force effectiveness. *Pharmaceutical Executive*. Available: <http://www.pharmexec.com/pharmexec/article/articleDetail.jsp?id=129291>. Accessed 23 March 2007.
17. Adair RF, Holmgren LR (2005) Do drug samples influence resident prescribing behavior? A randomized controlled trial. *Am J Med* 118: 881–884.
18. United States Government Accountability Office (2006) Prescription drugs: Price trends for frequently used brand and generic drugs from 2000 through 2004. Available: <http://www.gao.gov/new.items/d05779.pdf>. Accessed 23 March 2007.
19. Kaiser Family Foundation (2006) Prescription drug trends. Available: <http://www.kff.org/rxdrugs/3057.cfm>. Accessed 23 March 2007.
20. Marshall PC (2005) Rep tide: Pulling back in magnitude, pushing forward efficiency: Recent talk of pharma companies restructuring or even paring back their sales forces is the first acknowledgement that efficiency, and not noise, is the key to effective detailing. *Med Market Media* 40: 96.
21. Goldberg M, Davenport B, Mortellito T (2004) PE’s annual sales and marketing employment survey: The big squeeze. *Pharmaceutical Executive* 24: 40–45. Available: <http://www.pharmexec.com/pharmexec/article/articleDetail.jsp?id=80921>. Accessed 23 March 2007.
22. Millenson ML (2003) Getting doctors to say yes to drugs: The cost and quality of impact of drug company marketing to physicians. Blue Cross Blue Shield Association. Available: <http://www.bcbs.com/betterknowledge/cost/getting-doctors-to-say-yes.html>. Accessed 23 March 2007.
23. Kaiser Family Foundation (2006) National survey of physicians. Available: <http://www.kff.org/rxdrugs/upload/3057-05.pdf>. Accessed 23 March 2007.
24. Goldberg M, Davenport B (2005) In sales we trust. *Pharmaceutical Executive*. Available: <http://www.pharmexec.com/pharmexec/article/articleDetail.jsp?id=146596>. Accessed 23 March 2007.
25. [No authors listed] (2004) Hard sell: As expanding the sales force becomes a less attractive option, pharmaceutical companies are reevaluating their sales strategies. *Med Ad News* 23: 1.